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AN IMPORTANT PATENT DECISION.

THE most important patent decision ever rendered by the U. S. Supreme Court was handed down on Monday, March 4th, 1895. The title of the case and its outline are indicated in the following extracts from the opinion:

SUPREME COURT OF THE UNITED STATES.

No. 687, October Term, 1894.

THE BATE REFRIGERATING COMPANY, APPELLANT, *vs.* SULZBERGER, *et. al.*—AN AMERICAN PATENT EXPIRES WITH THE EARLIEST FOREIGN SIMILAR PATENT REGARDLESS OF DATE OF APPLICATION.

JUSTICE HARLAN DELIVERED THE OPINION FOR THE COURT, March 4, 1895.

On the first day of December, 1876, Bate made ap lication to the United States for Letters Patent for an Improvement in Process for Preserving Meat During Storage and Transportation. Before this application two foreign patents were granted for the Bate invention, one for the term of fourteen years by the British Government to William Robert Blake on a communication from Bate under date of January 29, 1877, which was sealed July 13 1877, and the present application was filed July 26, 1877. The other for a term of five years by the Government of the Dominion of Canada to Bate himself under date of July 9, 1877. After these foreign patents were issued, namely, on the 20th day of November, 1877, Bate received a patent from the United States expressed to be for the term of seventeen years, and assigned to The Bate Refrigerating Company, the plaintiff in this suit.

The present suit was brought by that Company July 25, 1892, for an injunction against the infringement of the American patent, and also for an accounting. It was set down for hearing in the Circuit on pleas and the bill was passed dismissing the suit. From that decree the case was taken to the Circuit Court of Appeals.

Both foreign patents of the Bate invention having expired before the expiration of the seventeen years specified in the United States patent, the following question arose in and having been certified before the Circuit Court of Appeals whether the invention for which the patent from the United States was issued had been "previously patented in a foreign country" within the meaning of those words in Sec. 4887 of the Revised Statutes, and whether the American patent expired under the terms of that section before the expiration of seventeen years from its date.

* * * * * * * * *

(Here follows a lengthy exposition of the law and facts governing the case, at the conclusion of which the Court decrees, as follows.)

Our answers therefore to the questions certified are, that the invention for which United States patent to Bate was issued under the facts stated, was "previously patented in a foreign country," within the meaning of those words in Section 4887 of the Revised Statutes, and that the United States patent to him expired under the terms of that section before the expiration of seventeen years from its date.

Let it be so certified to the Circuit Court of Appeals.

The plain English of this decision is, that an American patent expires coincidently with a foreign patent on the same thing, provided the foreign patent was granted previous to the issuance of the American patent.

In the rubber trade this decision will have direct bearing upon every patent that has been granted in both the United States and foreign countries. It will probably be some time before we learn just what interests are affected, but we already know that the main patent for reclaiming rubber by the chemical process, at present controlled by the Rubber Reclaiming Co. will expire on Nov. 1st, 1895, instead of running until 1901, as it would have done had this decision not been rendered. What is known as the steam patent, also controlled by the Rubber Reclaiming Co., would, if sustained in the pending suits, have three

and a half years yet to run, because that system was not patented in any foreign country.

We are informed by Mr. Mitchell, of the Rubber Reclaiming Co., that their suit against the Raymond Rubber Co. will probably be decided the last of this month, as all the testimony has been taken and the case will be argued in New Jersey within a short time. He also expresses the opinion that their suit against the Metallic Rubber Shoe Co., will go to trial before Nov 1st, when the patent expires.

It is to be hoped that this decision will speed the day when the rubber trade will be rid of the annoyance and burden of these alleged patents in processes for reclaiming old rubber. The prevailing estimate of the merit of these suits, is very clearly expressed by Mr. Spadone, president of the Gutta Percha and Rubber Mfg. Co. When asked what effect he thought this decision would have upon these suits, said he, "I do not think it will amount to anything, one way or another. Those fellows never had any case, and never had any patent that amounted to a picayune. They have simply been spending money and fighting the matter in the courts solely because they wanted to keep other people out of the business. Everybody in the trade understands this, and hence I do not see how any sort of a decision can affect patents which do not exist. Why, man alive! we reclaimed rubber by the steam process twenty years before that alleged patent was granted; and we have proved it conclusively in the testimony which we gave in the case. It is simply ridiculous to suppose there are any patents for reclaiming old rubber."

It is in the electrical industries that the decision will have sweeping effect. Among the companies interested is the General Electric Company, which loses its patent on the fundamental principles of the incandescent electric lamp, the manufacture of this valuable patent being now open to the world. The patents on the transmitter which is in use in the Bell telephone have also expired, and while several minor patents are still in force, the main principles are no longer protected. The Western Union Telegraph Company owns some patents which it loses by the decision, but the fact will, it is said, have little or no effect upon the company.

The effect of the decision will be noticeable in the future in the Patent Office, for it is now probable that the long delays which were caused purposely to prevent the granting of a patent in order that the American patent could have a long life after the foreign patent had expired, will cease, and the office will no longer be blocked with patent cases for years.

It is impossible now to estimate the number of interests concerned, and it is said that months may elapse before a majority of them are known. It is calculated, however, that more than a thousand patents have expired under the decision, where the owners thought that they had several years of life. It is conceded that many of these patents are not worth much even though they are in many cases the subject of litigation, but those which are at all valuable are generally very valuable. There are hundreds of suits now in the courts which will lapse because of the decision, and besides the loss to the owners of the patents the lawyers are lamenting the loss of fees from long-contested suits which will not be fought to a conclusion.

INSURANCE OF RUBBER-FACTORIES.

THE Rubber Manufacturers' Mutual Insurance Co., of Boston, commenced business on January 15, 1885, and an account of its success was printed in this journal two months ago. The secretary of the company has since favored us with a financial statement covering its business for the year 1894, of which an abstract is given below:

Amount at risk	$20,824,906.00
Gain in 1894	2,934,430.00

Assets.

Cash—office, bank, and in collection	$ 55,963.51	
Bonds and stock	104,252.13	
Corporation notes	71,250.00	$231,465.64
Contingent premiums		956,931.60
Total		$1,188,397.24

Liabilities.

None.

Present rate of dividend in cash ..... 70 per cent.

The officers of the company remain: E. S. Converse, president; B. F. Taft, vice president, secretary, and treasurer; and Benjamin Taft, assistant secretary-treasurer. The directors, in addition to these, are: Henry C. Morse, Wheeler Cable, O. H. Sampson, E. B. Page. James Bennett Forsyth, and A. W. Clapp, of Boston; Joseph Banigan, Providence, R. I.; George H. Hood, Chelsea, Mass.; Henry L. Hotchkiss, New Haven, Conn.; Robert Batchelder, North Brookfield, Mass.; Marcus Beebe, Malden, Mass., and George F. Hodgman, New York city.

THE TRADING IN RUBBER STOCKS.

MARCH 15 is the date designated by the directors of the United States Rubber Co., at which the recently-declared dividend of 2½ per cent. on the common stock becomes payable. Reference to the number of shares of common stock issued to date shows the amount required for paying this dividend to be $504,150, or at the rate of $1,008,300 per year. A statement has been widely published to the effect that the dividend was declared from the surplus earnings of the company up to April 1, 1894, amounting to $1,444,987. The subtraction of the amount of the dividend leaves $940,837 to be carried to working capital. This does not take account of earnings since April 1, 1894.

The transactions in the shares of the company on the New York Stock Exchange during the month of February were as follows, weekly summaries being presented, instead of daily reports:

LISTED ON THE NEW YORK STOCK EXCHANGE.

201,660 shares Common=$20,166,000.

194,005 shares Preferred=$19,400,500.

DATES.	COMMON.			PREFERRED.		
	Shares	High.	Low.	Shares.	High.	Low.
February 1	350	42¼	42	200	93	92½
February 2-8	3,851	44	42¼	264	94¼	93½
February 9-15	1,204	43	41½	125	94½	92½
February 16-22	520	42⅞	42	875	94½	93¼
February 23-28	3,150	42	39¾	320	94½	93¼
For the month	9,075	44	39¾	1,784	94½	92½
Month preceding	13,296	45	39¾	2,152	94⅝	91

RUBBER NIGHT AT THE BOOT AND SHOE CLUB.

Speeches, Music and Feasting.

THE Boston Boot and Shoe Club devoted their February dinner this year to India-rubber and invited the leading rubber men of the country to be present. Of the notables invited many were present, the few who were forced to be absent sending regrets and good wishes. The dinner was held at the Hotel Brunswick in Boston, the members and guests beginning to assemble at 4:30. After an informal reception in the parlors the orchestra started up and all filed into the dining room which was brilliantly lighted, the tables being decorated with scores of rubber plants, while in front of the president was a pile of Fine Pará rubber just as it comes from the hands of the Amazonian *Seringuero*. The guests were nearly all rubber men and the seating at the long guest table was as follows: A. S. Foster, President of the Club. On his right were:

Joseph Banigan, President of the United States Rubber Company.

Henry C. Pearson, Editor INDIA RUBBER WORLD.

Augustus O. Bourn, President Independent Rubber Co.

George Watkinson, Assistant General Manager United States Rubber Co.

E. F. Bickford, Superintendent Boston Rubber Shoe Co.

Frank D. Balderston, Selling Agent National India Rubber Co.

Arthur W. Stedman, of Geo. A. Alden & Co.

F. F. Schaffer, Superintendent Goodyear's I. R. Glove Co.

E. F. Carpenter.

Francis W. Breed.

At the left of the President were

Ulysses D. Eddy, of Flint, Eddy & Co., Exporters, New York.

H. H. Shepard, General Selling Agent National India Rubber Co.

W. S. Ballou, General Selling Agent Woonsocket Rubber Co.

E. H. Cutler, Selling Agent Woonsocket Rubber Co.

H. E. Sawyer, Selling Agent Boston Rubber Shoe Co.

John J. Banigan, Gen'l M'g'r Woonsocket Rubber Co.

Wm. B. Banigan, Gen'l M'g'r Marvel Rubber Co.

W. E. Plummer.

L. E. Bennett.

George W. Merritt.

H. B. Parker, Secretary, Boston Boot and Shoe Club.

H. L. Rice.

C. H. McDermott, Editor *Boot and Shoe Recorder*.

At the other tables were seated one hundred and thirty-two representative boot and shoe men. Among them were many prominent rubber men. From the Boston Rubber Shoe Company there were present Capt. Harry E. Converse, Costello C. Converse, Lester Leland, A. H. Yeomans, G. L. Richards, J. Alvin Scott and Wm. J. Wilson. From the American Rubber Co. there was Chas. W. Barnes, from the Enterprise Rubber Co., W. E. Barker, Wm. T. Janney, and Jos. L. Allen, and in addition the big jobbing houses of Sage & Co., Clark, Hutchinson & Co., Parker, Holmes & Co. and others were well in evidence and enjoying the whole affair. The tinted folder printed in blue, gave the names of the guests and in addition served as a novel and appropriate

MENU

A little nonsense now and then is relished by the Rubber Men

COTUITS
Self acting, in Individual Cartons

Mock Turtle, a la Condamine — Consommé, a la Caoutchouc

BROILED FRESH SHAD
Spring (H) eels with Rubber Soles
Cucumbers — Potato Croquets
"From the cause to the effect" — Compounded

Tenderloin Beef, always in Style — Roast Capon, a la Cut Prices
Delmonico Potatoes — String Beans
McAllister's Legacy — From the Windward Islands

Baked Lobster, Vulcanized à la Goodyear's — Lamb Chops, Fleeced Lined
Apple Fritters Glacé, au Cognac

Punch, à la Romaine
Local option with elephant's breath, delivered to-night, payable in the morning

Roast Larded Quail, Pick Toed
Saratoga Chips, Morrissey's Blue and Red's
Dressed Lettuce, Décolleté

Bavaroise au Café — Frozen Pudding
See Webster's Unabridged — Alaskas
Assorted Cakes — Pineapple Charlottes

FRUIT
Unforbidden in Home Market
Bananas — Apples — Oranges — Grapes

ROQUEFORT AND BRIE CHEESE
Rubber and Whiting Flavors

COFFEE
Keeley's Gold Cure

CIGARS
Fine Pará Wrappers — Africain Filler

ADDRESSES—"Bright" and "Dull Finished"

"Conversation Water" Cards Can be Obtained from the Waiters.

Full justice was done to the dinner after which President Foster rapping for attention said in substance:

This year we have with us gentlemen not connected with the leather boot and shoe business but, instead, the rubber business, a class with whom we are very closely allied, of whom we are very fond and, therefore rubber manufacturers and selling agents, I welcome you to-night around our festive board. I hope we may become better acquainted; I hope you may sell us goods a little lower than you have been doing. I hope you will give us a chance to reciprocate in some way the many kindnesses we have had at your hands, and I have no doubt this meeting will bring us closer together and we shall be glad we have met here this year. Gentlemen, we have with us to-night a gentleman who has been brought up in the rubber business one whom you have known all these many years that you have been selling boots, shoes and rubbers of his manufacture; one who has done a great deal for us all in making rubber boots and shoes better. I have great pleasure in introducing Joseph Banigan, president of the United States Rubber Co.

Prolonged applause greeted the announcement that Mr. Banigan was to speak, and when finally the room had become quiet he said:

I hardly thought your president would call upon me first for fear I might speak too long. When I was asked to say a few

words I was very much pleased to think I should have such a privilege, but when I saw the pile of Pará rubber in the middle of the room I was struck with sudden fear that you would cut it up into small pieces to chew on during a long speech. (Laughter.) The United States Rubber Co. is the one that I represent. That company as you all know is very kindly disposed toward those who trade with it. Its members are men, bright,—and youthful like myself, not a saint among us, yet we save as many soles as all the pastors put together. (Laughter and applause.) As I did not know just what you wished me to speak upon, and I know so little about all other things except my own business that I ask the liberty of saying a few words about India-rubber. It is an article used very freely from infancy forward. (Laughter.) First the beautiful baby clinging to its nursing bottle nipple, then to the rubber nursery toys, and next perhaps to the guardian of the peace clothed in rubber coat, his feet shod with a pair of rubber boots branded "Woonsocket Rubber Co." (Laughter.) Then to the letter band, or the bicycle band, used on a wheel that will outstrip the fleetest horse if you give it time, or on the valves of the steam engines that run the racers across the Atlantic. Every machine has some part of it made of India-rubber, and if you know of one that has none, tell the maker that he should have some.

Of the articles made of India-rubber perhaps none of them cost more than rubber boots and shoes, and when you appreciate the difficulties that we have who are unfortunate enough to be in that business.—(Laughter.) Don't laugh, gentlemen, you may get into it some day.—The difficulties we have to contend with are very great. Twenty-seven years ago when I entered the rubber business fine Pará rubber was dry and the loss in weight comparatively nothing. Tons upon tons of fine Pará rubber shoes we ground up. We bought them for twenty-seven cents per pound perfectly dry. When we were obliged to go outside of that, the fine Pará was dry, and loss of weight very small. To-day the loss in weight is very large and no man can measure it by looking at the piece of rubber. Thirty-seven or thirty-eight years ago rubber was cured in a careful manner. The lands belonged to the government, free for the natives to enter. A man gets into a canoe, takes his family with him, finds a place where there is an abundance of rubber trees, here he cuts a gap through the forest and builds him a house. This consists of four poles over four branches of four trees covered with palms. His tailor's bill costs him very little; he wears nothing. His wife is clothed with the same kind of material; there are plenty of fish in the water; the fruits of the country are dotted about in that section. He can take his blow gun, go to the top of a tree and kill birds. He is afraid of nothing but snakes. The jungle of the forest is so thick that no animal can get in it excepting monkeys and they are very good for monkey pies. He takes in about sixty trees, taps the trees with a small hatchet, makes a gash in the bark putting therein a small cup. The tree bleeds about a gill from each wound. He might make ten or fifteen wounds in the tree. Each day he collects the sap, brings it home and cures it by a fire of nuts that grow on the palm tree. The dense smoke from that fire has some chemical qualities that make the rubber of a fine nature and of a light brown hue. He kept that rubber three, four or five months. There was no customer. After a few months a man comes along with a Yankee notion store fitted up on a canoe, buys the rubber. It is all dry and nice; no loss in it. He pays something for it, a few trinkets that the man or his family may fancy, jugs of casash, plugs of tobacco. He struts about like a millionaire when he has sold the rubber until the casash is all drank when he goes to work again.

Times are changed; to-day we have fifty men enter the forests who employ ten, twenty, thirty, forty, or fifty men, and they are given the task of gathering a certain quantity of that sap. One man cures for twenty-five or thirty men and in an imperfect manner. Instead of dipping the paddle in the sap and holding it over the fire and smoke, they hang a large vessel on the limb of a tree. One man is constantly pouring into it with the fire burning under. Rubber cured in this way will lose weight when it comes to our market very largely. You may say that it would be easy with so many rubber trees to gather a vast quantity of rubber at any time, but you cannot get the labor to go there because they could not live. Only the Indians or natives can live there. The thermometer stands about ninety-five degrees. The land is covered with water about two months in the year. When the water subsides there is several inches deep of decayed matter—vegetable substance. No white man could live in it. If the supply of rubber becomes small we have to pay a higher price. Lo and behold, we may find ourselves with rubber boots and shoes all sold for a season to the jobbers and at a price that we cannot advance. They smile at us, and say, "Well, you will have better luck next time."

The amount of Pará rubber brought into this country twenty-seven years ago, say 1870, was only five million pounds, while in 1894 it was 28,326,000 pounds, amounting in value to $17,940,000. Of African sorts brought into this country we had in the same year 1894, 10,436,000 pounds, costing $4,462,920, and strange to say 9,793,342 pounds of that rubber, so-called, was nothing but water and mud, and that water and mud cost $5,396,000. Why should the United States of America give five millions of dollars for water and mud? There is no remedy that I know of, and we have to make our calculations on that line. We are told that it is an easy business to handle, and that there are large profits. There is not a manufacturer that has been successful, to my knowledge, except those who have entered into it in a small way. The Boston Rubber Shoe Co. had its Converse, one of the most brilliant men; a fast friend of mine, of whom I am proud (applause). The Goodyear Metallic Rubber Shoe Co. had its Lewis, father of the present G. A. Lewis,—he might be said to have been born in the business. The Meyer Rubber Co. had its Christopher Meyer, who, working with coat sleeves rolled up, and like myself, grew from small beginnings. The New Brunswick Rubber Co. had its Langdon, a practical man, the company grew from nothing. The Candee Co. had its Candee and every concern that has been successful has been a concern that grew from very small investments. Those who have put in large investments have usually failed. The Hyatt Rubber Co. had its origin in New Brunswick, New Jersey. Many may remember of the large investments of money, backed by all the knowledge about rubber that was then possessed, even backed by Christopher Meyer. They manufactured their goods and they were so very fine they would not put them on the market until they had a large quantity on hand. When they went to the market they found their goods were entirely worthless. The company had to go into insolvency. Mr. Hyatt left in disgrace for the old country. You have an example of this in the Pará Rubber Shoe Co. There lots of money and lots of brains were represented. Starting on a large scale they met with failure. You all know about it better than I. It was a Massachusetts concern.

Charles Goodyear is said to have been experimenting with a small piece of India-rubber which Hayward had mixed with sulphur. Becoming annoyed with it, he cast it from him; it lit upon a hot stove; he went out, and coming in a few hours afterward, to get rid of the obnoxious odor he picked the piece of

rubber off the stove and lo, and behold, the trick had been performed, it was vulcanized. It would stretch out and come back into position. Where is the man to-day, who knows what vulcanization is? We know it was a vegetable substance when it is mixed with various materials we put in it. We see it is changed over. It comes out after vulcanization and is a metallic substance. What takes place? We don't know. No chemist has ever discovered of what India-rubber is made except that it is a vegetable.

In buying rubber the price must be figured in Brazilian money and again in English money and paid for in English drafts. It is all carried in English bottoms, so you see we have not the best end of the rubber business after all, and our profits out of it depend upon the kindness and good nature of you gentlemen who are in the jobbing business to give us a helping hand. (Laughter and applause.) Well, the United States Rubber Co. has been called a trust, which it is not. It is a nice quiet, respectable corporation, intended to make amends for the many evils that have been done to the jobbers of this country by fixing prices so that they could make a profit. (Subdued whistling and laughter.) It is your end of the business to hold that position good. Flatter how you may, say what you may, the position is good. The jobbers if careful not to cut prices against one another will make good money. Four million dollars in a year divided among the jobbers of the United States is not a very little thing, and that trick of itself is a good one. If we give it away and destroy it, it is of no use to us. I do not mean to say that we have done that. I am the youngest member of the United States Rubber Co. I am a new comer to it, and perhaps should not say much about it. But after all if we take hold with a will, I think we might get over this loss of weight, this paying for water and mud that I speak about. They are getting tired of me, Mr. President, so I think I will close up. (Cries of "Go on, go on.")

I am a little frightened. I know so many of these good gentlemen. It reminds me of a story that I heard told, of a countryman of mine who was in the army in the late war in the front ranks carrying a musket. Suddenly his comrade in arms was shot down. The man said to him, "Miles, I am shot through the leg, take me to the rear." So Miles took him on his shoulders and rushed to the rear with him. As he hurried along a spent shell happened to strike off the man's head. An officer in the rear (I believe this is the customary place for officers during an engagement) said: "What are you going to do with that dead man, his head is off?" "His head off," said Miles; "the liar, he told me it was his leg." (Laughter and applause.)

President Foster next introduced Mr. Ulysses D. Eddy of New York, a partner of Charles R. Flint. Mr. Eddy said:

I have read in a book that an accident on a cook stove in a small house on Staten Island by which rubber, sulphur and heat were brought together, originated the rubber industry.

At the beginning it was strictly an American manufacture based on American invention and developed by American enterprise. But as its importance dawned upon the world, factories were started in Great Britain and on the continent of Europe. These factories were filled with American machinery and began their successful careers under the guidance of Americans.

The world's yearly product of crude rubber now reaches thirty thousand tons—more than half of this is sent to the United States and our factories pay out over sixteen millions yearly for this gum. They produce an infinite variety of articles of which it is an important component and their yearly sales of rubber goods exceed fifty millions of dollars in value. Of this vast sum nearly one-half is represented by boots and shoes.

The raw material is produced under peculiar conditions. Savage men seek it in the forests of the Amazon and the Congo, they gather it in the valleys of the Andes and of Siam. It is not, therefore, subject to the rapid increase and decrease of production that affects many great staples, such as wheat or cotton. For years it was the football of speculators. After a time the importation of crude rubber was organized, and the advantages of this are evidenced in the steadiness of prices which has been brought about. Not only is the importation of crude rubber unified, but the manufacture of articles in which you are all more or less interested, boots and shoes, has also been unified, and as a result there exists to-day a giant company with a capitalization of more than $40,000,000, every share of which pays dividends.

In spite of many years' development of this manufacture it is still empirical. The results of the combinations of certain substances with the mysterious hydro-carbon called rubber are known and utilized, but it is conceivable that far more valuable combinations shall be discovered which may revolutionize the industry.

It is certain that chemists have produced rubber in their laboratories, although in trifling quantities and at prohibitory cost, yet, it seems within the limits of probability that before many years pass, rubber factories will not only produce the manufactured article but the crude material as well.*

Mr. Eddy's speech was warmly applauded after which the President said:

As long as we have got into the rubber business perhaps you gentlemen would like to see it through. We have here to-night a gentleman who has some stereopticon views which he wishes to show you. He promises to give us all the processes, from the tree to the rubber shoe, and I have no doubt we shall be glad to go on with him. I have the pleasure of introducing to you H. C. Pearson, editor of THE INDIA RUBBER WORLD.

This announcement was received with generous applause and the speaker said:

I must confess that I am laboring under a trifling embarrassment at this moment which perhaps I can explain by a brief anecdote. A young friend of mine, living here in Boston, or rather in a suburb (we will say on the Boston & Maine Railroad, Western division), was going home on the train recently and in the seat in front of him was a corpulent old lady—exceedingly stout, in fact, as they say down in Maine, "pussy." As he sat there the lady turned around and said to him, "Will you kindly help me out at the next station? By the way," she said, "what is the next station?" "Malden," replied my friend, somewhat surprised. She looked surprised at his surprise, and in explanation said; "It is just this way. You know I am very, very stout and when I get off a train I have to be cautious and I get off backward. I started to get off at East Somerville and the conductor, thinking I wanted to get on, insisted on helping me aboard and started the train. I tried it at each station since, but here I am." (Laughter and applause.) Gentlemen, when I learned what Mr. Banigan was to say about gathering rubber I knew it would be said so truly and eloquently that what I was to say would not cast any sort of a shadow and I started to back out, but the President of the club mistook my intention and here I am. (Laughter.)

* This was followed by an exhaustive review of the markets of the world for which American goods were particularly fitted. Want of space forbids its publication in this issue but it will have a leading portion in the April INDIA RUBBER WORLD.

You all understand that India-rubber is from the juice of a tree, vine or plant. In fact there are hundreds of species of trees and plants that produce India-rubber. If any of you want to see rubber sap go out into the highways of the suburbs and break off a stalk of milk-weed. Here you have rubber sap pure and simple. At one time a company started a plantation of this plant and were going to go into the rubber business in Canada. The industry, however, proved a failure. The India rubber that we get commercially grows in a belt of country running almost directly around the world. That is, South America, Central America, Mexico, Africa, the islands of the Indies and Southern Asia.

At this point a fine map of the world was displayed on the screen and with a billiard cue for a pointer the speaker indicated the countries from which the one hundred and twenty or more varieties of rubber came. He said:

In South America the rubber is secured from trees, in Africa it comes very largely from vines, and in India and the islands it comes also from trees. The best rubber in the world comes from South America in the valley of the Amazon where there is an enormous section which produces rubber. All through the Amazon valley there are thousands of square miles of rubber trees, some of which have never been touched.

The fact that a certain country is full of rubber trees does not always mean that rubber is produced. For example, among the foot hills of the Himalaya mountains are extensive rubber orests that have never been tapped. The reason for this is that the tribesmen of that part who are but nominally under English control believe that a god dwells in the rubber tree and to cut it down or even tap it would be profaning his temple.

Views of the city of Pará were next thrown upon the screen and a brief description of this interesting rubber mart given. From there the speaker transported the audience to the city of Manáos one thousand miles up the Amazon. Then followed views of the business streets, the water front, the cathedral, the palace of the president, the water works built by an English engineer, and the public school. From the city the sightseers entered the forest and visited a clearing where stood one of the thatched huts such as the *seringueros* of the better class erect. Then came views of the virgin forest in all of its tropical luxuriance, followed by a fine picture of a native Indian attaching clay cups to a huge rubber tree, while at his feet lay the various utensils used in rubber gathering. Next came one of a native finishing his day's work, near his thatched hut, by dipping a paddle in the calabash of milk and smoking the rubber over a fire of palm nuts. Then came a reproduction of an ancient print showing natives making rubber shoes over clay lasts, smoking the rubber as fast as it was dipped. Leaving South America the company took a rapid flight to the United States and viewed the first rubber factory ever erected there. It is still standing in the Roxbury district of Boston. It was occupied by the Roxbury Rubber Co., who made rubber shoes and is now a part of the plant of the Boston Belting Co. They were nice looking shoes at first. The rubber was dissolved and spread upon the lasts and they were nice and smooth. The public got stuck on them at once and when warm weather came the rubbers got stuck on themselves, so the speaker said.

When a picture of the late Charles Goodyear was thrown upon the screen, the editor said in explanation:

Gentlemen, many of you have heard of Charles Goodyear, the inventor of vulcanization. I want to say, for the benefit of those here and to save myself many inquiries, that Charles Goodyear is dead. I have inquiries almost every day asking if he lives, if he makes Goodyear goods, where they can be found, etc. The seed that he sowed however is bearing fruit through the efforts of some very live rubber men.

Here were flashed on the screen a group of the leading rubber shoe men of the United States Co. and the Boston Rubber Shoe Co. The faces were at once recognized by all present and received with hearty applause.

Before showing the views of the rubber mill interiors the speaker said in explanation:

Almost every one has an idea that India-rubber is melted and poured as a part of its manipulation. As a matter of fact this is never done. To melt rubber means to turn it into a tar like substance that is worthless except for paint. The rubber business is like the bread business. A dough of rubber and sulphur is kneaded together and is then baked. That is all there is to it. Hard rubber has more sulphur and is baked longer than soft rubber. A rubber shoe is made up of pieces of cloth coated with rubber dough, pasted together on a wooden last with rubber cement, the finished article being baked in a great oven called a dry heater. Unbaked or unvulcanized rubber is of little worth. It is sticky in hot weather, hard as a board in cold weather. It will stretch but stays stretched. When vulcanized however it is not affected by heat or cold and is wonderfully elastic.

The interior views comprised the washing, drying, mixing and calendering of goods, fine views of compound rooms, vulcanizers, huge boot and shoe rooms where hundreds of hands were at work, and finally a magnificent room used as a sorting and packing room for rubber boots.

INTRODUCING COLCHESTER SALESMEN.

TEN snap-plates with the camera are enough to tell a complete picture-story of how Colchester rubber boots are sold, from the first appearance of the traveling salesman presenting his card, to his smiling exit from the store, after having booked a good order, All of which shows that the Colchesters must be easy selling goods. These lines are suggested by the receipt, from Sage & Co., the Boston agents for Colchester goods, of a folder containing "half-tone" views of one of their salesmen, photographed in the attitudes natural to the salesman who knows his business in the various stages of dealing with a buyer. The circular will not fail to win the attention of any shoe-merchant to whom it comes to announce that the salesman is on the road. Another original card of introduction sent out by Sage & Co. is in the form of a circular letter, under one of their regular office headings, on which is posted a photograph—of postage-stamp size—of the particular salesman whose coming is announced, with his name, of course.

DRUMMER FOR RUBBER HOUSE [*to shoe-dealer*]—I'm on my annual tour and can show you a good line. [*Quotes prices.*]

Dealer—Gum, gum! That's too much. It overshoets the mark.

Drummer—Then you won't give me your order this year?

Dealer—Not this year; some other year. Goodyear!

[Drummer bounces out and walks with elastic step to the dealer's rival, a good stretch away.]—*New York Press.*

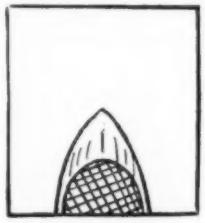
INDIA-RUBBER HORSE-SHOE PADS.

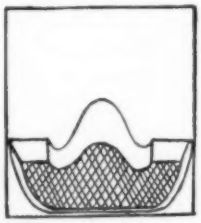
By Gustav Heinsohn.

THE paving of streets with asphalt has done much, in America as elsewhere, to extend the use of India-rubber in horse-shoeing. There are other reasons suggested by veterinarians for the use of rubber pads in this connection, but what has appealed most strongly to horse-owners is their value in the prevention of slipping.

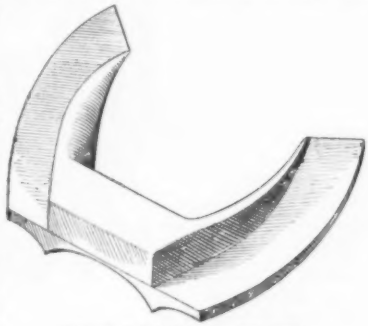
ROSE RUBBER AND LINEN FROG-PAD.

It is not many years since rubber horse-shoe pads were introduced here from England, but they are now sold by every important dealer in horse-goods in New York, and the trade of these houses extends to most of the other cities, but especially to those having asphalt streets. Meanwhile, American inventors have not been idle, so that the home trade is now supplied chiefly from this side of the Atlantic. A visit to several horse-shoeing establishments showed that rubber pads are asked for at all of them, some of the shops having daily calls. One manufacturer, who claims to be not yet wholly ready for business, says that he sold 2700 pairs of these pads in December and January. A retail harness-dealer, who keeps in stock a dozen makes of pads, reports the sale during January of 800 pairs. It is worth mentioning that an important firm in the iron trade in New York, doing a large business in horse-shoes, have fitted up a department for rubber horse-pads, and have lately put out an illustrated catalogue devoted to these goods alone—the first publication of its kind in the world.


CURRIE FROG-PAD.


CURRIE BAR-PAD.

Among the horse-owners in New York whose farriers use the rubber pads are Messrs. Robert Bonner, Frank Work, William K. Vanderbilt, Henry Hilton, and Lloyd S. Brice. Three large brewing companies, employing many horses in their delivery service, are mentioned as buyers of rubber pads from one manufacturer. The writer saw an official of one of the companies in the New York fire department giving an order for an additional supply, the pads in use having proved satisfactory. The manufacturers all express the belief that the sale of pads will become large among the business houses employing horses for their delivery wagons, after the advantages of the India-rubber have become more widely known. The question of expense is still a drawback, however, although the makers are trying to minimize this. In addition to the cost of the rubber, horse-shoers generally make an extra charge for putting on the pads, the result of which would soon become an important item in a large stable.


MORAN ALL-RUBBER HOOF-PAD.

The most interesting and most difficult subject that concerns the horseman is that of shoeing, since a horse without sound feet is of little value. While hundreds of works have been written upon this subject, there is yet a lack of agreement as to the best practice. As early as 1827 an eminent English veterinarian, writing of all the horse shoes then in use, said: "There is perhaps but little merit after all in these various shoes; . . . . many of them owe their good qualities to doing no harm." There are probably those who to this day object to the shoeing of horses as a brutal practice, injurious to the foot, which by nature is a delicate and beautifully-organized machine. But horses in a state of nature neither walked on smooth, hard pavements, nor drew immense loads; the advance of civilization offers as good reason, perhaps, for the shoeing of horses as for clothing the feet of man, which were also bare in the primitive state. As time advanced, the men who used horses did not need veterinarians to tell them that shoes were needed, though the proper form of the shoe still remains an open question. The Arabs, from very early times, when requiring hard service from their horses, shod them with thin plates of iron which protected the entire sole. The same idea, as will be seen farther on, is finding favor in our day, though with the use of different materials.

HALLANAN RUBBER-PAD, WITHIN THE SHOE.

The chief feature of the old Arab horse shoe was that it presented a hard surface to the whole of the base of the foot—wall, sole, and

frog. There is no more eminent an authority to-day than George Fleming, LL.D., F.R.C.V.S., principal veterinarian to the British army, who asserts that in the healthy foot of a horse the ground surface of the wall (outer casing of the hoof), the bars (continuation of the wall at the heel), and the frog all bear their relative proportion of weight It was in recognition of this idea that Thomas Taylor an English inventor, in describing his rubber frog-pad in *Land and Water*, in 1889, wrote:

HALLANAN RUBBER PAD, ON BAR PRINCIPLE.

When a horse is shod in the usual way, the frog is raised half an inch or so from the ground (quite at variance from what nature intended); consequently the frog, being thrown out of use, becomes shrivelled and hard, and when at work gets bruised, setting up active inflammation of the synovial membrane of the navicular joint, the result being caries and incurable lameness. The pads not only allow the frog to receive its natural pressure, but prevent concussion, and, as the shoe wears away, they to a great extent give the horse a firmer hold, preventing slipping on the wooden pavement.

Taylor's pad cannot be illustrated here, but some other frog-pads are shown, embodying in common the feature of being attached to a leather plate, intended to be placed between the wall of the foot and the iron shoe, to be held by the nails driven through the shoe, and to cover the entire sole. In none of the pads does any rubber come in contact with the sole, it being the unanimous testimony of farriers that rubber "draws" the feet of the horse. Sole-leather is generally used as less heating though the Rose patent offers a heavy canvas backing for the pad as still better.

THE NEVERSLIP PAD.

It has been urged against the frog-pad that it does not give to the foot of the horse all the support needed; or that, by pressing upon the frog alone, while offering no support to the rest of the foot, injury to that member may be caused. Hence the bar-pad has been produced, in connection with which the farrier needs only to nail on a steel tip, instead of the customary entire shoe. The pet theory of Lafosse, the great French veterinarian of the last century, was that the posterior parts of the horse's foot—frog and bars—should rest upon the ground, without the intervention of the shoe. It is in harmony with this idea that the iron "bar-shoe" has long been used in cases of lameness—supporting a portion of the foot which the ordinary shoe prevents from touching the ground. Good authorities have commended the bar principle for universal use in horse-shoeing, and the rubber bar-pad now comes as an improvement upon the iron bar, by reason of its elastic quality. This, like the frog-pad, has its leather plate.


THE KRESS PAD.

Still another idea in rubber pads is to fill the whole interior of the iron shoe, in an attempt to supply the pressure to the sole of the foot which the horse finds on the soil in an untamed state. Such a pad is made by M. Hallanan and is illustrated here, while another cut represents a variation of the same pad, embodying the bar feature already described.


TONGS FOR KRESS PADS.

While veterinarians are not committed to any special form of these pads, they are agreed as to the real value of India rubber in connection with the horse's foot—at least in cases of disease. Some of them object to the constant covering of the sole with an air-tight plate, dissenting from the idea that the dressing of tar and oakum usually laid on under the plate will preserve the foot in a normal condition. Such an objection was attempted to be met by the "Neverslip" pad, illustrated here, which has an opening to admit the air and moisture to the sole. This pad, by the way, is made of a compound consisting of cork and India-rubber, with canvas facing on the foot side to prevent wear from dirt between the pad and shoe. There are other forms of pads which, instead of being attached to leathern plates and nailed to the hoof, are compressed within the iron shoe with the aid of tongs, and held in place by steel flanges fitted to grooves in the shoe. These can be removed if desired, when the horse is not at work. One of these, here illustrated, is manufactured on a large scale for John Kress, of New York. Another cut shows the method of application by means of the tongs. Other rubber appliances in the nature of pads are inserted within the iron shoes only in the snow season to prevent "balling." A late American patent is for a rubber horse shoe, in the usual shape, to which is attached a rubber hood large enough to cover the entire hoof, the object being to supply a shoe without the necessity of using nails. In Great Britain the rubber patents in the horse shoe line have averaged half a dozen or more a year for two decades. Specimens of French and German manufacture have also reached this country.

DEMPSEY CUSHION PAD, WITH AND WITHOUT THE SHOE.

Dr. S. K. Johnson, chief surgeon at the New York Veterinary Hospital, said to the writer: "India-rubber pads

have undoubted advantages in cases of lameness in horses, but no one form can be universally commended. In my own practice I have found every type desirable at one time or another. Only the fore feet are usually shod with rubber, but I have sometimes found it better to use it on all the feet. I believe that the rubber pad is here to stay, and that it will become more and more popular, but I don't look for its use to a great extent on horses used for business purposes. It is expensive, in the first place, and then its use is not essential on sound horses. Apart from cases of lameness, the chief value of the rubber pad is in protecting horses on slippery pavements. A horse in perfect condition needs nothing better than the elasticity of its own feet to protect it from the effects of concussion on hard pavements, unless it happens to be an animal of very high action. If the horse is properly shod, the foot readily accommodates itself to the shoe. Thus the frog, if it has not been pared by the horse shoer (and it never ought to be), will come to the ground and performs its function in the horse that is shod the same as in the natural state."

M. Hallanan, patentee of two of the pads illustrated, has been a practical horse shoer for many years, having contracts with large New York concerns to keep their horses shod. His first use of rubber was made while experimenting with a tender-footed horse weighing 2070 pounds which was a source of constant trouble. He devised a pad which was made at the works of the Gutta-Percha and Rubber Manufacturing Co. several years ago, and the good effect upon the horse referred to led him to experiment further, until his pads are now in wide demand. They are patented in this country and in England.

Robert Currie is a dealer in horse-goods generally, who began to consider the manufacture of hoof-pads on account of delays in getting his orders for imported goods filled. He now makes pads under his own patents, devoting to the work an entire floor in his store on Sixth avenue, New York. He attaches the rubber to the leather with a specially-prepared cement, while Mr. Hallanan uses a powerful sewing machine.

Morgan & Wright are the only rubber-manufacturers who are making hoof-pads on their own account. The use of such goods in Chicago is said to be very extensive, and largely due to the enterprise of this firm. Their pad (the Dempsey patent) covers the entire foot bottom. It is flat on that face which is placed next to the foot, thin on the sides and toe, which the shoe covers, and thick at the center and heel, where protection is needed. Thus while the frog and heel quarters have a thick rubber bearing, the shoe lies close to the foot, separated only by the thin rubber, and can be firmly nailed.

WHY RUBBER TIRES DETERIORATE.

By P. Carter Bell, F.I.C., F.C.S.

IN writing about rubber tires, whether solid, cushioned, or pneumatic, the critic must appreciate from the outset that there are fully as many causes for deterioration as there are styles of tires. The only way, therefore, to write a general article is to strike as plausible an average as possible, and gather all kinds into one general class. The history of nearly all lines of manufacture in which India-rubber is used proves that when competition has once begun, that quality has steadily gone down. This is simply because the ordinary purchaser is not able to tell how heavily rubber has been compounded, and the manufacturer, being but human, is tempted to take advantage of that fact. In justice to the manufacturers it may be said that as a rule they are forced to this position, because purchasers are so strenuous in their demands for cheaper goods. Now, the manufacturer being forced to obtain such results, and usually being without a knowledge of chemical phenomena, puts in cheapeners that have no affinities, and the result is disastrous.

Pneumatic tires, except the "hose pipe," consist of an inner air-tube and an outer covering, the tread. The resiliency of an air-tire depends more on the quality of the stock of which it is made than any other one thing. The elastic and resilient qualities of any compound of India-rubber are ascertained by comparison with known standards in pure-gum goods. To get the very best results from either air-tube or tread the rubber should be most carefully and thoroughly vulcanized. Examination of air-tubes in certain makes of tires showed that in some cases they were only about half vulcanized. Now, it is a fact well known to all who have made a study of the subject that unvulcanized or partially vulcanized rubber is apt to deteriorate very rapidly, is easily affected by climatic changes, and is attacked by oils or acids far more easily than is vulcanized rubber. Anyone can tell whether rubber is *under* vulcanized. If, on compression between thumb and finger, a dent is left in the rubber, that fails to disappear at the end of a few seconds, you may suspect that the rubber is not thoroughly vulcanized.

Careful experimentation has also proved that iron in combination with rubber often has a damaging effect. Rubber is often compounded with iron oxide to get a red that shall imitate the antimony red. The color is somewhat similar, but the goods are widely different, and it is a difference that only those well used to handling rubber goods can detect. Of the materials used in ordinary compounding, shoddy and gum substitutes are most often the cause of trouble. To what extent they are used in the tire business I am not prepared to say; but they are sometimes found in the cheaper goods. Aside from these various earths used as adulterants, and both lead and sulphur in certain forms, when combined and vulcanized, may bring about conditions that cause the tire to deteriorate soon after it is put in use. Further than this certain inactive chemical compounds become active when mixed with rubber and submitted to heat, and may develop acids that are

destructive. This being true, manufacturers should shun cheap gum substitutes, and select one that is in a marked degree alkaline. With such there will never be any trouble.

Tires that have laid for some time in stock or in disuse become brittle, and gradually the rubber cracks on the surface as if it were cut by a knife. The old-fashioned opinion was that this trouble was due wholly to atmospheric influences. While this may be true in a measure in certain cases, in many others it is due to the compounds of which the tires are made, and will be found to be the result of acids developed during vulcanization. Again, the rubber on the surface of certain tires will detach itself in small particles or chunks. It took some time to locate this trouble, but it was finally found that it was due to the presence of oily matters in the rubber compound, which caused it to lose its adhesiveness. Another reason for the short life of tires is that a large amount of sulphur is put in, a high heat given for vulcanization in order that the goods may be turned out rapidly and cheaply. Now, as a matter of fact, a long slow cure, at a medium degree of heat, and as little sulphur as possible, will give results that will so far exceed the others that manufacturers can well afford to practise it. Many times have I known what was called a poor rubber compound made tough, durable, and far more elastic, by cutting down the sulphur and lengthening out the cure.

Thus far the subject of the deterioration of rubber tires has been treated from the standpoint of the chemist, which standpoint cannot be ignored by the rubber-manufacturer who is desirous of turning out a product that can be depended upon to give good service under right conditions. It is proper that the treatment of this subject should carry us back to the compounding of the rubber used, for without right manipulation at this stage it will be impossible to make tires that will last or wear well. The bicycle-manufacturer, while he may not possess a knowledge of chemistry,—and it is not essential that he should,—may possibly gain some points from this paper for use in interviewing rubber-men with regard to the methods and the materials they use in the production of tires.

As for the buyer of a bicycle, he must be content to await the test of wear to learn whether or not he has become possessed of a durable set of tires. If they give way before they should, and he is unable to get a new pair under his guarantee, his only hope is that through trying a different maker next time he may fare better. But it does not take a chemist to remind bicyclists that there are causes for the deterioration of rubber tires, for which neither rubber-man or bicycle-manufacturer can be held in the least responsible. There are other things for the bicyclist to guard against in the care of his tires than riding over rough surfaces or picking up tacks. India-rubber is a substance which requires delicate handling in order that all its desirable properties may be preserved, no matter how well the manufacturer may have done his work in the first instance.

A rider who leaves his wheel for a half day in the sun cannot expect his tires to last as well as if they had been in the shade. Hardly anything will take the life and elasticity out of a thin body of rubber like the sunlight. The rubber stores appreciate this, and either keep their goods out of the sun or change them so often that they get no hurt. Nor is it wise to allow oil to drop on the tire. The practice that certain wheelmen had of cleaning the tire with a handful of oily waste was foolish in the extreme, because it injured the cover, and then did not do the work as well as water would. In case a part of the rubber crumbles away, leaving the fabric of the cover exposed, the threads should at once be covered with Gutta-percha or some other cement. If this is not done they will absorb water which will follow them far inside of the cover, and will eventually rot them off. As a matter of fact there are lucky and unlucky riders, that is in the matter of punctures; but it is well to note that the unlucky ones are usually those who are in the habit of starting off without taking the trouble to pump their tires up full. As a result the tire gives out, and then they work the guarantee. To know all about one or two types of tire is about all that the average wheelman can hope to accomplish. To do this he must rely on the man from whom he buys, his own experience, and his common sense.

A BIG ORDER FOR ENGLISH GOLF-BALLS.

AS illustrating the extent to which the game of golf has gained a footing in the United States it may be mentioned that a single order for 25,000 dozen balls has been given lately. The order was given to secure a contract by which A. G. Spalding & Bros. are to control the sale in this country and Canada of the "Silvertown" ball, manufactured in England by the India-Rubber, Gutta-Percha, and Telegraph Works Co., Limited. While there is as yet no official golf-ball, the "Silvertown" is in exclusive use on many links, and it is claimed that its sale amounts to 60 per cent. or more of the whole trade the world over. There is an immense variety of goods produced by the Silvertown company, and they are energetic in pushing the sale of every article on their list. While bidding on the construction of the proposed Pacific cable, they had time to arrange an attractive display of pneumatic tires, golf-balls, and other sporting goods at the late Stanley Cycle Show. At the same time some American firms are preparing to enter into competition with them in golf goods, at least to the extent of trying to control the home market. When asked what time would be required for disposing of 25,000 golf balls, Mr. Snyder in charge of the wholesale department of A. G. Spalding & Bros. in New York, said that this number would supply about half the expected demand for the coming season. While the contract price is not stated, it is probable that the cost, with charges and duty added, will not be far from $3.40 per dozen.

* * *

THE Gutta-Percha and Rubber Manufacturing Co., Limited, of Toronto have been successfully engaged for some time past in turning out Gutta-percha golf-balls. There is a rapidly growing demand for these goods in the Dominion, where golf gained popularity before it reached the United States. President H. D. Warren, of this company, is himself an enthusiastic golfer. The Gutta-Percha and Rubber Manufacturing Co. of New York have also made some balls.

C. M. Moseman & Bro., of New York, have become agents in this country for Ashford's golfing goods, manufactured in Birmingham, including balls similar to if not identical with the "Silvertown" brand.

RUBBER IN A SPORTING-GOODS STORE.

IN no other field has the use of India-rubber increased so rapidly at any time as in the making of sporting goods within the last few years. Any rubber-man might find it of interest to spend a half-hour in a first-class store devoted to this business—say that of a certain New York firm whose success has made their name familiar wherever baseball is played, and in the United States, at least, no one can hope to be more widely known than this. First comes the ball officially adopted by the two great baseball associations, in the interior of which India-rubber is used, retailing at $1.50 each. Five other grades of baseballs are listed in this catalogue at 75 cents or higher, and all of them contain rubber, but none is used in the cheaper grades, some of which retail at 5 cents. Only the makers know how many baseballs are sold, but the number must be enormous, since even the "official" ball is warranted only for a single game. Other articles for the use of baseball-players into which rubber enters are a home-plate listed at $.50, and a pitcher's box plate, at $5. These are made of white rubber, with pins to hold them in place on the ground. There are also patented body-protectors, for umpires and catchers, made of rubber, which when in use are inflated with air, and do not interfere with the movements of the wearers. These cost $10 each, with smaller sizes for boys at lower figures. The list ends with various sorts of elastic bandages and the like, for preventing or remedying injuries on the field.

Tennis offers a greater variety of uses for India-rubber. There are rubber balls, of course, which are listed in this catalogue as high as $5 a dozen. For rackets there are corrugated rubber handle-covers, for use during play, which serve to give a better grip. These cost only 25 cents. For carrying rackets, there are waterproof—"mackintosh"—covers at $1 each. The Obear glove, for tennis-players, is made of very light rubber, with corrugated palm and thumb and open back. It both protects the hand and holds with a tight grip. It is also adapted for polo, hand-ball, and rowing. The tennis shoes which are offered in this store differ from those in the general rubber trade, being made of leather or canvas, with different styles of rubber soles. The most expensive is a Russia-calf shoe, high cut, with flat red rubber sole, listed at $7.

Football, as we know it, could hardly be played without India-rubber. Besides the regulation balls with rubber bladders, there are balls made of rubber without a leather covering. Balls range from $7 down, and rubber bladders can be bought separately for $1.50 and less. Rubber mouthpieces and nose-masks also enter into the outfit of the football-player—the latter at $2.50 each and the former at 50 cents.

Golf-balls of the better sort are made of pure Gutta-percha, but efforts are being made to put hard-rubber balls in their place for less money. While an English ball has the lead among golfers, an American made Gutta percha ball introduced by this house is said to have a good sale. Golf-tees of India-rubber are generally used, and there is a ball-cleaner, consisting of a rubber case with a sponge enclosed, which sells for $1.50. For golfers who prefer them, there are rubber-faced gloves, which give a better grip, it is said. Two new games, played chiefly for practice, are called "captive golf-ball" and "linka," and both require some rubber for their outfitting. Finally, a hard-rubber head has been invented in England, to compete with the wood golf-clubs, the advantage claimed resulting from its elasticity. The tests made here have won favor for it.

Cricket gives an opportunity for the use of rubber in the balls, batting-gloves, and wicket keeping gloves. The finer croquet sets include hard-rubber balls at $2.50 each, and mallets with rubber-cushioned heads—hard rubber on one end and soft on the other—at $10 each. For basket-ball there is a leather-covered ball, with rubber bladder, at $4 each, and a rubber ball at $1.25.

Fencing-foils have rubber buttons or tips; some of the gloves worn are rubber-faced; and there are fencing shoes with patent rubber soles. Rubber Indian-clubs have lately been made. There are nickel-plated dumb-bells, with rubber bands around the ends to prevent chipping and to make them noiseless. Striking-bags are made with rubber bladders, the latter costing from $3.50 down. A striking-bag designed and endorsed by James J. Corbett costs $10. There are all kinds of health pulls and gymnasium outfits which embrace rubber, including rubber-soled gymnasium and indoor-running shoes.

The list of rubber goods is not complete without Layman's patent pneumatic sporting-boat, already described in THE INDIA RUBBER WORLD. Another novelty is the "ski," or Scandinavian snow-shoe, each of which is formed of a single piece of wood, with a piece of corrugated rubber to assist in keeping in place the sole of the wearer's foot. Still another item, from the same house, deserves to be noted. A bowling alley in New York has bought an outfit of rubber ten-pins, and the makers will accept further orders. Their noiselessness commends them, besides which they have an advantage in being lighter than wood. The rubber ten pins are made hollow and have not proved quite heavy enough, on which account it is proposed to load the next lot with white wood. The price charged per set for the rubber is $16, while ordinary ten-pins are sold for $4. There are also rubber-covered balls for this game.

Finally the store visited contains an extensive department devoted to bicycles, and appropriately, for, no matter how great the possible utility of the "wheel," its use so far has been chiefly within the domain of sport. It was remarked more than once at the late bicycle-shows that, if everything but the India-rubber had been left out, what remained would have proved of great interest to sight-seers. Should the bicycle people, by the way, turn out as

many wheels this year as have been planned, they will need more than a million pneumatic tires for the United States trade alone, but it is left to the reader to figure just how much crude gum this will involve. In addition to the tires, the complete equipment of a bicycle makes room for India-rubber for the pedals and handles, while it is used also in various accessories—the fixtures of some of the lamps, bicycle-stands, and other items. The use of pneumatic tires on sulky-wheels—which in less than three years has driven every other style from the field—is another important item of rubber consumption in the line of sport.

After such a showing as has been outlined here, it can hardly be said that the rubber-men of the United States have not contributed their share to the promotion of praiseworthy sports. It is not intended here by the way, to offer the above as a complete list of the sporting goods into which India-rubber enters, but only what was seen in a tour of a single house in the trade.

BRIEF ABSTRACTS OF RECENT RUBBER PATENTS.

AMONG recent patents issued by the United States Patent Office, embodying applications of India-rubber or Gutta-percha to a greater or less extent, have been the following. It is not practicable here to do more than to note the use of rubber in each case, with sufficient detail to enable those who are interested to decide whether or not to look into any particular patent more fully:

TIRES.

No. 531,822.—Pneumatic Bicycle-Tire. Charles E. W. Woodward, Chicopee Falls, Mass., assignor to the Overman Wheel Company, same place and Hartford, Conn.

A tire comprising an inner tube of rubber, a series of unwoven transverse threads applied straightaway side by side to the outer surface of the tube at a right angle or substantially a right angle thereto, a layer of rubber applied to the outer surface of the transverse threads, a series of unwoven threads laid straightaway side by side upon the outer surface of the layer of rubber, arranged at a right angle or substantially a right angle to the transverse threads, and graded in length from the center of the outer periphery of the tire inward, and a layer of rubber applied over the longitudinal threads.

No. 531,951.—Pneumatic Tire. John G. A. Kitchen, Ardwick, England.

The combination with a wheel rim of a pneumatic tire comprising an air tube, an outer cover having thickened edges each formed with an annular groove arranged at a short distance from its free edge, and retaining rings held in the grooves concentric with the wheel rim and projecting inwardly from the inner sides of the thickened edges.

No. 532,189.—Wheel-Tire. Thos. B. Sloper, Devizes, England.

A wheel-tire in which diagonal threads are arranged slanting forward from the bottom of the rim to the running surface (and without threads slanting downward and backward) in such a manner that the lateral expansion or flattening of the tire immediately under the wheel base puts extra strain on the diagonal threads and thus prevents a resisting wave from forming in front of the wheel when running.

No. 532,298.—Pneumatic Brake. William B. Wallace, New York, N. Y.

The combination, with the bicycle, of the pneumatic brake arranged between the steering fork and the bicycle wheel, the inflatable bag for actuating the brake, the air bulb on one of the handles of the machine, and the tube connecting the bulb and bag, the tube extending through the steering fork and one of the handle bars.

No. 532,466.—Pneumatic Tire. Sydney Lee, London, England.

The method of securing one edge of a cover to the other edge by means of two hoops or rings one secured to each of the edges, the edges of the cover overlapping and being retained in position solely by the pressure in the tire.

No. 532,942.—Wheel-Tire. Charles Bivort and Jean Nadler, Paris, France.

In a rubber tire for wheels, the combination of an elastic core or inner tire having radial openings or cavities whose greatest depth is in the direction of the spokes, a flanged metallic wheel-rim embracing the inner edges of the inner tire, a textile lining arranged about the inner tire and wheel rim, and elastic outer casing or cover for protecting the same, a hoop having side flanges embracing the turned edges of the textile fabric and the edges of the elastic outer casing for clamping the same on the wheel rim, and fastening devices for clamping the hoop and rim together and for securing the spokes thereto.

No. 532,950.—Bicycle Rim and Tire. Lewis A. Erickson, Stromsburg, Nebr.

The combination with a U-shaped metallic band provided with a central T-shaped annular rib forming recesses, of the tire provided with a canvas strip having its edges folded and provided with stiffening devices in the folds forming projections to fit the recesses, strengthening strips in the outer angles of the projections, and protecting ribs extending inwardly over the head of the T-shaped rib, and protecting the inner tube of the tire therefrom.

No. 532,960.—Pneumatic-Tire Mending Device. Alfred D. Hitchcock, Waterbury, Conn.

In an instrument of the character described for mending holes in pneumatic tires, of a needle, a support therefor, an eye in the end therefor, and a reversible hook in the shank portion, between which two points rubber bands are stretched, so that the needle and bands may be passed through a hole in the tire, the reversible feature of the retaining hook enabling the needle to be withdrawn, leaving the rubber bands in the hole.

DRUGGISTS' SUNDRIES.

No. 531,878.—Atomizer. Thomas J. Holmes, Lexington, Mass.

In an atomizer, the combination with the liquid conveying tube of the imperforate guard tube loosely surrounding the same, and extending downward into close proximity to the center of gravity, of the space of the interior of the liquid holding receptacle.

No. 532,911.—Atomizer. Joshua Rosett, New York, N. Y.

The combination, with a liquid-containing vessel, of a tubular head inserted into the neck of the same, an air-supply tube connected with the head, and interior valve-seat at the upper end of the head below the discharge aperture of the same, a valve having a sliding movement and guided in the head below the seat, the valve being provided with a nozzle having a discharge orifice and an exteriorly-threaded bore below the same, a supply tube having an exteriorly-threaded upper end and longitudinal grooves or air-channels in the threaded portion, and a diametrical guide-block inserted into the lower end of the tubular head for guiding the supply-tube in following the motion of the valve during the atomizing action.

BOOTS AND SHOES.

No. 532,429.—Elastic or Anti-concussion Heel and Sole for Boots, etc. Leslie Rogers, Debra Doon, India.

The heel pad constructed with a multiplicity of air cells, terminating at the edge of the heel, in combination with a diagonally arranged ball pad constructed with a multiplicity of air cells and terminating on each side, at the edge of the ball of the foot,

thereby leaving a space between the heel and the ball and between the ball and the toe unoccupied by cells.

MISCELLANEOUS.

No. 531,812.—Labor-manipulating Device. John Stites, Salem, Oreg

A device for manipulating labels, and comprising in its structure a bulb, a soft rubber base plate having an opening or passage therein with which the bulb communicates, the bulb being secured to the base plate, and an auxiliary plate provided with a central opening capable of receiving the base plate the auxiliary plate being removably secured to the base plate and forming a continuation thereof by springing the auxiliary plate on the edges of the base plate.

No 531,872.—Boxing-Glove. Benjamin F. Shibe, Bala, Pa.

In a boxing glove the combination of a suitable hand-stall, of an inflatable air pouch, the back or striking portion of which s formed from a blank having on both of the side edges thereof scollops or notches, the edges of the scollops or notches being joined together and secured to the portion of the pouch that rests upon the back of the hand-stall, to shape the pouch, and transverse stays or partitions, in the air pouch between its ends for holding the pouch in shape and rendering it flexible when inflated.

No. 532,419.—Riding-Saddle. John B. Haines, Jr., Philadelphia, Pa., assignor, by direct and mesne assignments, to Clara E. Haines, Charles H. Hirst, Rudolph Winterstein, and W. O. Freytag, same place. Filed May 3, 1892. Renewed Oct. 24, 1892.

A riding saddle consisting of an inner pad cover, an outer pad cover and an inflatable bag of air-tight material contained between the pad covers and closely inclosed by same, the pocket formed by the covers being narrowed and made shallower at the middle part, whereby two bearing surfaces one forward and one back of the rider are secured.

No. 532,600.—Machine for Washing Rubber, &c. Charles F. Simon, Bristol, R. I.

In a washing machine for the purpose described, the combination with a tank provided with the outlets, a cross partition extending down to the level of the outlets, and a perforated screen extending below the partition, of an inclined trough located in the tank having its lower end extended in width, a shaft journaled in the general axial plane of the trough, and spiral blades carried by the shaft.

No. 532,732.—Detachable Pad for Breast-Straps. Gustav L. Heyman, Carlisle, Ky.

A harness pad consisting of a rubber air chamber formed in one piece with marginal overlapping lips or claws projecting upon the opposite side from the bearing surface of the pad.

No. 532,786.—Tip-cap for Umbrella Ribs. Alfred B. Hunt, Brooklyn, N. Y.

The improved tip-cap for umbrella ribs, the same being made of elastic material and having a cylindrical body provided on the inner side with an open, lengthwise slot, and an enlarged spherical head divided centrally, in continuation of such open slot, the opposing edges of the metal being in contact, thus forming a closed but elastic head.

No. 532,834.—Combined Inflatable Horse-Collar and Pad. Henry G. Stiebel, Jr., St. Louis, Mo.

A hollow pneumatic after wale of a horse-collar, and an overlapping hollow pneumatic neck-pad formed integral with a continuous passage extending from the interior of the after-wale to the interior of the pad, whereby both wale and pad may be simultaneously inflated, in combination with a suitable-inflating-valve, and a stiff non-inflatable fore-wale, the ends of the leather casing of the latter being stitched and extended, the pneumatic hollow after-wale being partially inclosed or incased by the portions of the leather casing, and the pneumatic-neck-pad being covered by the upper ends of the leather casing of the fore-wale, and a cloth-covering for both pneumatic after-wale and its integral neck-pad stitched to the ends of the leather casing.

TRADE-MARKS.

No. 25,808.—Dress-Shields. The Canfield Rubber Company, Bridgeport, Conn., and New York, N. Y. Filed Nov. 9, 1894.

Essential feature.—A crescent-shaped figure with the likeness of Jared H. Canfield and the representation of a factory thereon. Used since November 1, 1882.

No. 25,865.—Rubber-Soled Shoes, Rubber Overshoes, Water-proof Clothing, and Other Rubber Goods. North British Rubber Company, Limited, Edinburgh, Scotland, and London, England. Filed July 20, 1893.

Essential feature.—The representation of a pair of weighing scales. Used since 1856.

EXTRACTION OF INDIA-RUBBER BY BOILING.

AT a recent meeting of the London section of the Society of Chemical Industry, Mr. Thomas Christy exhibited specimens of different sorts of India-rubber, specially with the view of showing that rubber can be extracted by water. In the first instance the *Landolphia* was shown with the roots and boughs as cut from the living vine; next the stems after they had been boiled. The next stage was the débris of the bark and the rubber still hanging on to one end of a twig which otherwise was perfectly clean and free from any succus; then there was the mass as it fell into the pan with the bark mixed with the gum. It was then shown in different stages of treatment up to the *Landolphia* rubber as sent into commerce. Another *Landolphia* was shown from the Kongo; this had been wound off direct from the vine into a ball and dried in the course of winding.

Another exhibit was Almeidina, so called from the man who discovered it and worked it out in West Africa [in the south of Angola]; it also goes by the name of "potato" gum. This gum has most interesting properties, which have been fully explained in the scientific papers, especially by Mr. Lascelles Scott. From a series of experiments lasting over four years, it was found that by placing in a box, open to the sun and rain, some of the very best India-rubber and Gutta-percha, some pure Almeidina, and also Almeidina mixed with India rubber and Gutta percha, at the end of the experiment the best rubber had almost disappeared and was quite worthless, whereas the India-rubber and Gutta-percha mixed with Almeidina remained perfectly sound and with full elastic properties. He obtained some tons of Almeidina, melted it, and added to it a considerable quantity of water and some tannic acid. This was well stirred and it took up a large quantity of water. When the mass was sufficiently kneaded it was put into bags and allowed to cool, and then sent down to some large India rubber works, and the proprietor was so pleased with it that he offered to take any quantity at 1/6 to 1/10 per pound. This rubber, of course, had a quantity of water in it; allowance had to be made in charging the weight when it was handed to the railway of at least 20 per cent. As practical manufacturers on a large scale had now admitted its great value, he then met them and told

them that he could no longer continue to manufacture this gum, and that he was prepared, if they gave him a sufficient order for the raw material, to give them all the information. Suffice it to say that they gave the order, but the foreman resented it very much and did all he could not to use this rubber, until his place was handed over to another man who thoroughly understood the valuable properties of Almeidina. The consequence was that a very much higher class of goods was turned out of these works and large contracts made. This shows how difficult it is to overcome prejudices.

Another gum, also obtained by being boiled, was Chicle gum. This came from Mexico, and was used in America as the base for chewing-gum. Mr. Christy had sent a sample to one of his friends, who was certainly one of the most advanced men in the rubber trade, and explained to him the most simple manner of testing it, viz., chewing it; he did so, and he wrote back saying that he was delighted with the material and wanted a quantity for experiment, and, if it went down to a certain price, to put his name down for the first supplies. This gum was also found useful in plaster making and for pills.

In conclusion, there were many other gums which he believed would advantageously yield to the treatment of cutting down the boughs and boiling them in water, finally extracting the rubber as the mass cooled. He had sent a request to several places where the rubber-trees were growing wild, suggesting that this plan should be tried.

It may be added that Mr. Christy has not been the first to recommend boiling as the means for extracting the greatest possible amount of gum from a given tree. In a report on "Gutta Producing Trees" in the *Journal of the Straits Branch of the Royal Asiatic Society* (Singapore), Mr. L. Wray, Jr., some years ago recorded his experience in boiling the bark of the Gutta-percha tree, instead of being content with the amount of gum obtained by allowing the sap to flow from incisions, as in the ordinary method. The extra amount thus gained, as stated by Mr. Wray, seems almost incredible. It is not known how far his experiments have been repeated. More recently the process of M. Dieudonné Rigole, described in THE INDIA RUBBER WORLD of May 15, 1894, has attracted some notice, but we are informed by Messrs. Robert Soltau & Co. (New York) that the cost of the Gutta-percha prepared by this process is a great hindrance to its introduction. Some estimate of the cost of the methods outlined by Mr. Christy would doubtless prove of interest to the trade.

THE REPORT OF A GERMAN RUBBER COMPANY.*

TO THE EDITOR OF THE INDIA RUBBER WORLD: An article in your issue of December, headed "India Rubber Industry in Germany," makes special reference to the report of the Harburg-Vienna Rubber Co. for 1893-94, which report seems to me a bold attempt to throw dust in the eyes of the shareholders and to cover the blunder of their trusted managers. If you will kindly allow me a small space I will endeavor to give you a few hints on the methods of administration now in force, beginning with the taxes.

The sum of 217,777 marks reported as paid for taxes is something appalling to look at, but deduct 50,000 marks from the above as the sum paid by the company in taxes for their office staff, as arranged by agreement, instead of drawing it as wages. This will considerably reduce the tax. Besides, the company have a number of employés dwelling upon their property, apart from the factories who pay fixed rents, but the company pay their taxes. They have also very extensive dwellings for directors, travelers, visitors, etc., in Harburg, Berlin, Vienna, and Wimpassing, on which they pay taxes. Their factory proper is not more heavily taxed than any other firm.

As to the price of rubber, I think you will agree with me that up to July of last year (and the report in question ends with June) there had been little change in rubber prices since 1890, and all this time the Harburg-Vienna Rubber Co. have been paying from 28 to 30 per cent. profits up to this year. It is true that heavy freights have been paid on rubber, because nearly all their raw rubber is purchased in the English markets, but it must not be lost sight of that rubber is the smallest item used in their manufactures. All other materials, such as pigments, duck, cottons, etc., are bought in Germany and Austria at prices from 30 to 40 per cent. cheaper than in England. Thus the Harburg-Vienna Rubber Co. have considerable advantages over their English and American competitors.

The strike referred to in the report should never have taken place, had common sense and judgment been exercised by the administration. One instance of the petty tyranny of the officials will illustrate my point. An employé of the company spoke once at a labor meeting, for which assertion of his civil rights he was dismissed by the director without any notice, and in his pass-book (which every workman must produce before he can get any other employment) was written "A Socialist and Dangerous Labor Agitator." This man was refused work wherever he showed his book. The strike referred to began in January, 1893. It arose out of the introduction of iron lasts. An increase of wages was requested (on account of the extra weight in handling the new lasts) amounting to $\frac{1}{16}$ of a cent per pair for shoes made for adults and less than that for children's shoes. The directors ignored the request. When the iron lasts were brought forward for use in golosh making the old request was renewed and, meeting with a rather unceremonious refusal, the men went on strike. Notwithstanding there was more work on their books at the time than could have been turned out for the rest of that year, the company denied the work people a few cents extra per month, but they could pay hundreds of marks to surround their place with soldiers and policemen on the 1st of May, fearing that an indignant people might clamor for their rights. I may here mention that a better lot of workmen can never be found anywhere than the Germans and Austrians, if they are treated like human beings.

The complaints in the report as to the causes of their reverses, such as "no show for home trade," "new factories glutting the markets," "depreciation of silver in Asia," are simply clap-trap. Their whole home trade, with that of Brazil added, would not keep one factory going for three months.

It was thought necessary in 1891 to remodel all lasts for the season of 1892. This was a step in the right direction. With other improvements this was a great boon to the shoe trade of the Harburg-Vienna Rubber Co. They went over a large amount of new territory with their sales, and had as much work as they could do at both mills in 1892. For 1893 matters looked still better. Orders came in to double the output of 1892. So

* The above letter comes unsolicited from a subscriber in Europe and is printed for what it may be worth, in criticism of a report given to the public by the company named, in explanation of its reduced earnings last year. This journal of course is not interested in the matter in any way.—THE EDITOR.

pleased were some of their customers with the goods of 1892, that they ordered double for 1893, a thing never known before in the history of the Harburg-Vienna Rubber Co. As early as June, 1893, there was work enough for the remainder of the year. But one must go farther back for the origin of the blunder. In 1892 a "ring" was formed by shoe-manufacturers—among them the Harburg-Vienna company—to sell shoes at a price fixed by the "ring." The Harburg-Vienna company thought they could do a little underselling on the quiet, resulting in the general collapse of the "ring." The company then sold their shoes at random, and recovered from the underselling fever too late, as all the samples were out and the greater part of their orders booked for 1893-94. What was to be done? They had got into a quagmire, and to escape from the unfortunate dilemma reduced the quality of the rubber in the shoes, it is said, by 15 per cent. less than the samples, and altered the soles so as to take 10 per cent. less gum than the samples sent out. As the result of their grasping, 50,000 pairs of shoes were pronounced useless. The greater part of these were destroyed. But this was nothing new to the Harburg-Vienna company, for in 1891 30,000 pairs were thrown on their hands, and destroyed, on account of the heels falling off. Still they paid a 29-per-cent. dividend in 1892.

Summing up the whole report, the situation is about this: (1) Blindly underselling other firms for the mere sake of monopolizing the whole trade; (2) reducing the quality of the rubber without any practical test of the length to which such reduction could safely be carried; (3) inferior shoes delivered to customers for which compensation had to be allowed; (4) non-delivery of orders caused through a strike for which compensation had to be paid for loss of trade and disappointments. E. R. M.

TARIFF RATES ON RUBBER CORDS.

THE customs appraisers have been called upon for a decision relative to the rates of duty on importations of India-rubber cords and braids. On January 18 the board, in session in New York, listened to an argument by Messrs. Curie, Smith & Mackie, counsel for a number of importers. The tariff act of 1890 embraced the following paragraph:

354. Cotton cords, braids, boot, shoe, andcorset lacings, 35 cents per pound; cotton gimps, galloons, webbing, goring, suspenders, and braces, any of the foregoing which are elastic or non-elastic, 40 per cent. *ad valorem; Provided*, That none of the articles included in this paragraph shall pay a less rate of duty than 40 per cent. *ad valorem*.

In the tariff law of 1894 the same classes of goods are somewhat differently treated, a single rate of duty being prescribed for all the items in the paragraph, as follows:

263. Cords, braids, boot, shoe, and corset lacings, tapes, gimps, galloons, webbing, goring, suspenders and braces, woven, braided, or twisted lamp or candle wicking, lining for bicycle-tires, spindle binding, any of the above made of cotton or other vegetable fiber and whether composed in part of India-rubber or otherwise, 45 per cent. *ad valorem*.

The last quoted paragraph does not, as might at first appear, increase the rate on goods of this class; on the contrary, the specific duty of 35 cents per pound, on certain items in the former law, was equivalent to 80 or 90 per cent. *ad valorem*, whereas, in the law as it now stands, no duty higher than 45 per cent. is placed on any item of rubber cords and braids. This is a change worth noting, as reducing the rate of duties on this class of goods, but the question is raised whether a further reduction would not result from the proper construction of the law. It is, in brief, whether cords, braids, and similar goods, in which India-rubber is the component material of chief value, should not be admitted as "manufactures of India-rubber," at 25 per cent. *ad valorem*.

A DINNER SEASONED WITH HUMOR.

WE should judge that the "Hard Times" complimentary Christmas dinner tendered to their employés by the Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited, on Monday evening, December 17, was well seasoned with merriment over the unique menu card. The items are copied here as likely to be read with interest in rubber factories generally:

MENU.

Oysters.

"Tuck's." "Grummets." "Mackintosh."

Soup.

Pure Pará Bouillon.

Fish.

"Gutta Perch" Oil Dressing. "B. C. Salmon," with Cement Sauce.

Boiled.

"Pará" Hams. Rubber Boots.

Roasts.

Goose, stuffed with Old Couplings. "Paramatta" Dressing.
Tenderloin of Belting.
Travelers (when they don't get orders).

Entrées.

"Baker Fabric" stuffed with Burlaps. Corrugated Spaghetti Tubing.

Game.

"Reindeer" Antimony Sauce. Duck (32 oz).
Poker, with Hard Rubber Chips.

Cold Dishes.

Suction Hose Sliced. "Lion" Tongues.

Vegetables.

"Jim Dandy" Garden Truck, a full line.

Breads.

Wringer Rolls. African Biscuits.

Relishes.

Pickled Discounts. Congo Balls, Unvulcanized Scrap.

Pastry.

Tart Jokes, in "shut-off" Nozzles. "Maltese Cross" Hose Carbolized Dressing.
Shoddy Pudding, with Soapstone Dressing.
Sulphur Custard. Stuffing-Box Rings, set in "Diamonds."
Celery (every week sharp). Cheese (S. H. Packing).
Wine, "Toronto" water, well filtered—½ pints only.
Tea, Calendered Leaves. Dull Finished Lemonade.
Coffee (Reclaimed, à la Boarding House).

GOD SAVE THE QUEEN.

There was more humor of the same kind apparent in the preparation of the program for the dances which followed the dinner. The numbers were: (1) "Maltese Cross" lancers; (2) "Belt Press" waltz; (3) "Hook and Ladder" polka; (4) "Fire Hose" reel; (5) "Kinkproof" schottische; (6) "Ajax" lancers; (7) "Fireman's" galop; (8) "Sliding Pole" jersey; (9) "Anti-Rattler" quadrille; (10) "Car Spring" lancers; (11) "Siamese" two-step; (12) "Pure Gum" waltz.

RUBBER AUCTIONS IN ENGLAND.

IN replying to a correspondent, the Dresden *Gummi-Zeitung* says in regard to the India-rubber auctions in the London docks: "The British government takes no interest whatever in the auctioning-off of the goods stored in the warehouses of the docks. The docks themselves do not belong to the government, but are private property. The scheme is about as follows: A broker receives from the importer of the goods an order to dispose of the same. The broker sends out catalogues of the goods to be sold, with the marks of the several lots, to merchants likely to buy. The latter, armed with this list, call at the warehouse and satisfy themselves as to the quality of the different lots. The auction itself takes place in one of the city salesrooms, where the buyers govern themselves by the memoranda they have made on their lists at the inspection of the goods."

RUBBER IN CENTRAL AMERICA AND MEXICO.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The observations which I had an opportunity to make while in Central America for some time past in the capacity of a civil engineer satisfied me that, if India-rubber is ever to be produced again in that part of the world in important quantities, it must be the result of planting and cultivating the trees by people from the United States. The rubber-trees in Nicaragua and the neighboring republics have nearly all been destroyed by the wasteful methods of tapping employed by the Indians, and this improvident class cannot now be expected to remedy the waste caused by their own hands.

I should consider that a great opening exists in Nicaragua and Costa Rica for men with capital to engage in rubber-planting. Lands well suited for the purpose are cheap. In Costa Rica, especially, titles are good, and there are no forced loans and no taxes, while the government offers a subsidy for the planting of rubber-trees. The lower San Carlos valley, where it joins the proposed route of the Nicaragua canal, is probably the best land for rubber on the isthmus, judging from the luxuriant growth of the native trees there.

Mr. Harry W. Brown, of the firm of Brown & Harris, at Bluefields, has been engaged in the India-rubber trade there for the past eleven years. His firm have planted some 80,000 rubber-trees there, and more would have been planted by this time but for the tempest-in-a-teapot revolution which has come to an end only of late. Mr. Brown was an exile during its continuance, and remained for some time in Texas. C. S. T.

Nashotah, Wis., January 18, 1895.

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TO THE EDITOR OF THE INDIA RUBBER WORLD: Your readers may be interested in the following extract from a letter I have received from Mr. Theodore Olsen, city comptroller of Omaha, Neb., who recently made a careful investigation of the isthmus of Tehuantepec, including some plantations of India-rubber and coffee combined:

In answer to your question as to what I think of coffee- and rubber-growing on the isthmus, the country is too new and the planting of these trees in too young a stage for me to report upon their success in all parts of the isthmus. But around Jaltipan—which, in regard to elevation and other important conditions, seems to be similar to the localities south on the Coatcoalcas and other rivers on which they are now planting—I saw the coffee-trees loaded with coffee, and more of it than in any other place in Mexico where I found this crop grown. The rubber-trees on the same plantations also seemed to be doing splendidly.

I regret to say that on account of an accident to the negatives sent to the United States to be developed I am not now able to send you, as I intended, photographic views of our coffee plantations shaded by rubber-trees. F. O. HARRIMAN.

Jaltipan, Vera Cruz, Mexico, January 3, 1895.

HOW TO SOFTEN RUBBER.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Would you very kindly favor us with a method for softening rubber? EDITOR AMERICAN ARTISAN.

Chicago, January, 1895.

[As our contemporary does not tell us in what shape the rubber is we can only give him very general rules. If it is unvulcanized gum, naphtha and a score of other solvents will do it, or a small amount of heat will accomplish that end. If it is vulcanized *soft* rubber almost any animal oil will soften it, but the result will be that the rubber itself will be destroyed. If it be hard rubber or vulcanite, heat will soften it.—THE EDITOR.]

EXPECTS TO GO TO THE KONGO.

TO THE EDITOR OF THE INDIA RUBBER WORLD: I am expecting to go to the Kongo in the spring, as U. S. Consul, I hope. Have served about seven years there. I find rubber very plentiful in some districts. Would be glad of the addresses of our most important dealers, say importers and manufacturers. J. H. CAMP.

Lima, Ohio, Jan. 18, 1895.

WHO MAKES RUBBER QUOITS?

TO THE EDITOR OF THE INDIA RUBBER WORLD: Will you kindly inform us who manufacture rubber quoits?

LATTA & MULCONROY.

Philadelphia, Jan., 1895.

HYPOSULPHIDE OF LEAD.

TO THE EDITOR OF THE INDIA RUBBER WORLD: We have an idea that in some one of your journals you mention a non blooming black compound. If this is so can you tell us in what number it appeared, or can you tell us what will prevent a black compound from blooming. L. JOY & CO.

Newark, N. J., Jan. 22, 1895.

OUR RUBBER GOODS STILL GOING ABROAD.

EXPORTS of India-rubber goods from the United States during 1894 make a better comparison with the returns for 1893 than is to be found in most lines of manufacture. The total of all domestic exports was less for the latter year than for the former, while rubber goods show an increase. The figures for rubber goods for several years past are given here:

In 1894	$1,536,144
In 1893	1,441,046
In 1892	1,555,411
In 1891	1,349,491
In 1890	1,175,151
In 1889	937,497

While these figures are not particularly large, it is more satisfactory to see that they are growing than an opposite showing would be. At the same time our dependence upon foreign rubber-manufacturers is decreasing In 1894 we imported only $356,954 worth of rubber goods, against $390,601 in the preceding year, and $665,000 twenty years ago.

As for the classes of goods embraced in these exports, about $6000 of the increase of 1894 over 1893 was in boots and shoes and about $90,000 in other manufactures of India-rubber.

PRICES AND QUALITY OF BICYCLE-TIRES.

COMMENTING upon some paragraphs from a recent issue of this journal, *The Wheel*, (New York) remarks: "The tobogganish slide in the price of pneumatic tires is creating some comment and no little suspicion in the rubber trade. THE INDIA RUBBER WORLD has taken up the subject, and while it is hardly reasonable to suppose that any tire-maker will sell his goods at a loss, it seems certain that with the present slender margin of profit, a further reduction can only be made at the expense of quality, if, indeed, it has not, in some instances, already suffered by the keenness of competition and slashing of prices. It is well that not only buyers and purchasers, but the users as well, should have a care in this respect. The mild warning conveyed by THE INDIA RUBBER WORLD is worth heeding."

BIG PROFITS OF THE DUNLOP COMPANY.

SOME figures of interest in connection with the extent of the rubber-tire trade were recently made public at the annual meeting of the Pneumatic Tyre Co., Limited, held in Dublin. The number of bicycle-tires for which contracts had been made for the British and the foreign trade in the past two years were thus contrasted:

	1893.	1894.
For home trade	150,972	231,874
For foreign trade	43,350	85,500
Total	194,322	317,374

"With regard to American trade, they had had three years' hard work in that country. It was a very peculiar trade, for the traders in America were very independent. As a matter of fact, no three manufacturers were united as to the use of one particular tire but 1894 had shown a remarkable change in this respect. In New York, previously, the Dunlop tire was represented by two companies. This year fifty-one companies showed the Dunlop tire.

"As to the vehicle-tire, they regarded that trade as stupendous. This department had to be treated in an entirely different way, but the directors had come to the conclusion they would not sell it. They had received offers for the purchase of that department. They were offered a sum of money that was so large that it might not do them good to tell the amount. They had a good deal of experience, and they felt that they would not be warranted in parting with this source of profit. If they sold that department they would have the vehicle tire trade handicapped by the project of the promoters. The directors, therefore, proposed to ask the shareholders to increase the capital of the company by £25,000. If they gave the directors this money they would go on with the vehicle-tire department, for they had every confidence in it. They had to fight a great opposition to the cycle-tire and they surmounted that opposition. The opposition did them good, and of course, the opposition to the vehicle tire would be tenfold."

The Pneumatic company is the original Dunlop company, and has been remarkable for the size of its dividends. The total profits of the company for 1893 were reported to be £149,319, and for last year £157,183, making a total for the two years of $1,532,510. An unusual feature of this business is that the inventor of their tire—John Boyd Dunlop—has been profiting by the success of the company, having held a good block of their stock from the beginning.

THE HIDDEN SOURCES OF LOANDA RUBBER.

HOW the rubber that comes from Loanda is gathered remains a secret in the kinky heads of the untutored pagans who roam the primeval forests of central Angola. This vast Portuguese possession, south of the Kongo Free State, has never been measured. Loanda is a thriving city on the Atlantic coast, but the rubber exported therefrom grows far inland. The traveler by steamer up the Quanza river will reach the head of navigation at Dondo—a distance of 160 miles or so. Hither is brought the produce of the interior on the heads of sturdy blacks, with their greasy hair in dangling plaits, the skins of leopards and monkeys about their loins, and their nakedness crusted with the dirt of a lifetime. From the east they stream in almost endless succession, and ever in single file, bringing only useful articles of commerce, though their return loads may not be more useful than rum. Back from Dondo another 150 miles is the flourishing town of Malanji, noted for its trade in India-rubber. The rest of the story may best be told by Mr. W. Clayton Pickersgill, an English gentleman who has lately penetrated that country:

"A study of rubber would carry the curious very far afield. Malanji is the principal center of the trade; but in all probability there is not a man's load of growing rubber [*Landolphia* creepers] within 150 miles of the town, and Malanji has already been referred to as situated nearly double that distance from the coast. Every year the source of supply recedes, and only the bolder spirits dare follow. Bold spirits, however, are not wanting for this kind of labor. Anything which gives the African an opportunity of roaming; of prowling in the forest; of foraging, trapping, and shooting, is employment which he does not decline. Six hundred and twenty-two tons of India-rubber—the quantity shipped from Loanda to Lisbon in 1892—represent an immense amount of industry. [This would be about 1,393,280 pounds.] The value of the export was £95,826, of which sum we may suppose that half at least went to the natives, seeing that competition has lessened the profits of trade. One would like to know how much good that £47,000 odd did them, and what there is to show for it at the present time. It is estimated that the returns for 1893 will record a decrease of India-rubber, although there was more exported during the previous year than in 1891."

THAT CANADIAN RUBBER AGREEMENT.

THE men in the wholesale shoe trade in this country are a decent lot of people [says the *Canadian Shoe and Leather Journal*], but they have one failing, they never pull together. Two or three attempts have been made to secure an *entente cordiale* with but indifferent success. A year ago an understanding was arrived at in regard to trade terms, and almost every one signed an agreement fixing the dating of goods and the terms of credit. The charm was, however, broken by one or two houses backing down on trifling pretexts. At the commencement of last season a meeting of those interested in rubbers was held, and an agreement drawn up fixing the discounts and terms. Although this understanding is supposed to have practically been adhered to, we have every reason to believe that the spirit of the undertaking was broken by one or two of the contracting parties before the ink was dry on the paper upon which their names were signed. This is deplorable among men who ought to realize the sacredness of an obligation, even if they did not see the necessity for its being undertaken. The only way, it seems, to secure the carrying out of an agreement of this nature is to fix upon a heavy penalty, and insure its payment by having the contracting parties deposit marked checks for the amount at the outset.

SOME GERMAN RUBBER FABLES.

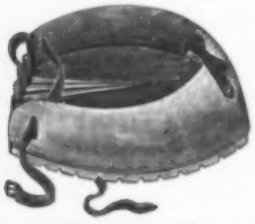
WHAT incredible fables may be invented and served to the public is shown by an announcement of the Berlin *Illustrirte Zeitung*. It gives the information that Charles Goodyear, while detained in the debtors' prison of Clichy, Paris, in the year 1860, was shot and killed by a sentinel. According to very authentic statements Goodyear died in New York, July 1, 1860, within the circle of his family a peaceful, natural death. Who is it invents such distorted stories? And who is the Munchausen to whom our respected contemporary is indebted for the news which makes one's hair stand on end, that in the French colonies a ten-year-old rubber tree furnishes daily caoutchouc to the value of from 50 to 60 marks!!! They must possess beautiful ideas in regard to the production of crude rubber!—*Gummi-Zeitung* (*Dresden*).

NEW GOODS AND SPECIALTIES.

A GOLF-BALL that both professionals and eminent golfers have put to practical teats and are enthusiastically recommending is the new Saint Andrew. It is made of a new composition and, it is claimed that its lasting properties are greater than those of Gutta-percha, particularly in countries where that substance is affected by the heat or climate. It floats freely, and cannot be hacked like the ordinary ball, making it very economical. A special feature is its elasticity which gives it a bounce or "slot" from wood, thus enabling the player to make it a far longer drive when using a wooden club, than can be accomplished with the ordinary ball. The paint is put on by a new process which makes it thoroughly fast. Another point in favor of the ball is that it can be easily remade. Manufactured by Thornton & Co., 90 Gordon street, Glasgow, Scotland.

NOT A HOOF-PAD, BUT A RUBBER HORSE-SHOE.

WITH all the advance that has been made in veterinary science, the shoeing of horses remains a troublesome matter, described by some of the ablest authorities as a "necessary evil." One point not to be forgotten is that every nail driven into the hoof, no matter how carefully, weakens it, or at least involves the possibility of injury. A split caused by a shoe-nail is like a broken finger-nail—it will not heal, but in time it may be pushed out of the way by the new growth. Very many attempts have been made to invent a nailless horse-shoe, but so far little success has been met. The latest device in this line to be patented is shown in the annexed engravings and is called the "Eureka" overshoe for horses. The inventor, John Kress, has been a horse-shoer for many years, as his father was before him, and for two years past has had a large trade in his rubber hoof-pads. Having become fully convinced of the value of India-rubber to the horse's foot, and also of the desirability in many cases of a shoe without nails, he has brought out this shoe. It is a horse-shoe of the ordinary form, made of India-rubber, stiffened with a metal plate hinged at the toe to give it the proper adaptability to the foot. The fastening straps shown in the first illustration aid in making the shoe fit closely. There is a thin layer of rubber to cover the sole, which prevents "balling" in snow, while the corrugated surface of the shoe proper prevents the horse from slipping. It is offered especially for horses of fine breed, and its advantages for horses in theatrical performances are pointed out. The inventor, whose address is No. 215 East Fifty-fifth street, New York, reports that a company is being formed to make this shoe on a large scale.



OVERSHOE FOR HORSES.

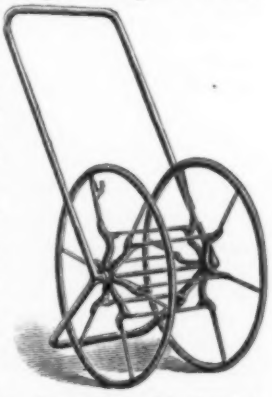
THE SHOE APPLIED.

THE PHILADELPHIA LAWN SPRINKLER.

AN entirely new type of lawn sprinkler is that shown in the accompanying illustrations. The parts are made of brass, and as will be readily seen by referring to Figures 1 and 2, consist of a nozzle of cone shape, the upper or discharge end being perforated and having a screwed spud or nipple in its center; screwed to the nipple is a cone with a finely perforated disk forming its discharge end. Figure 3 shows the sprinkler in operation. The water, in its course from the hydrant, is unobstructed until it reaches the perforated end of the nozzle which divides it into solid streams. The streams strike the upper cone at a point above the plate, and are thus converted into spray, while the water which passes through the spud or nipple forms a fine center spray on its discharge through the finer holes in the disk of the upper cone. By raising or lowering the cone on the nipple the space to be sprinkled may be regulated. Removal of the cone and the screwing of a cap on the nipple converts the sprinkler into a long range sprinkler for garden, lawn or flower use. The sprinkler is supplied in the straight style shown in Figure 1, with a stand as shown in Figure 3, with spud attachment for running it to the ground, and with a carriage having a hose reel attachment. Manufactured by the Philadelphia Lawn Mower Co., 3107 Chestnut street, Philadelphia, Pa.

IRON FRICTIONLESS HOSE REELS.

THE illustration shows what is perhaps the best type of iron reel that has ever been put on the market. It is made under the Wirt patents and has the following advantages: it is absolutely frictionless and has the qualities of strength, neatness and convenience. It is very light in weight and the wheels are high, making it exceedingly easy to run. Every part is constructed either of wrought iron pipe or malleable iron, making it practically indestructible. It is so shaped that it forms a fine nozzle-holder for a lawn sprinkler and can be adjusted to any position without handling the hose. It was the only hose reel of all those exhibited that received an award at the World's Columbian Exhibition in 1893. An excellent feature about this reel is that it is so constructed that the whole reel can be readily taken apart and boxed in a very small space for shipping. This allows of greatly reduced shipping rates, and in addition a greater quantity can be stored in less space, saving warehouse room and guarding against shop wear. Manufactured by Wirt & Knox Mfg. Co., Independence, Mo.



THE LEAGUE TIRE.

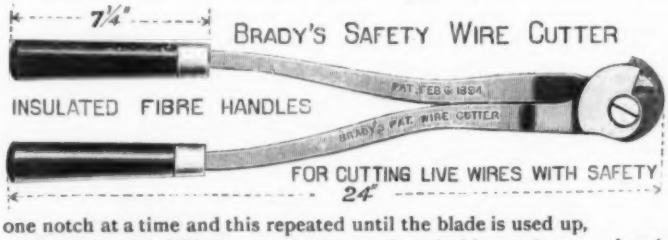
MANY of the displays at the late bicycle-shows included wheels equipped with a new tire known as the "League." It is a light, double-tube tire, laced and cemented, and is offered to the trade by the New York Belting and Packing Co., Limited, as their leader for this season. The "League" is the result of an attempt to avoid a drawback which, in the experience of the company referred to, attached to inner-tube tires, of the cemented variety, when made in molds—as has been the rule hitherto. They found that the high pressure needed in vulcanizing under this process was liable to stretch and weaken the fabric, drive the rubber into its meshes, and deprive it of elasticity, with an inevitable loss of resiliency. In adopting a new process of vulcanization, the manufacturers believe that they have been especially fortunate in combining durability and strength with lightness and resiliency. Besides, the appearance of the tire is not marred by any mold work or fin on the tread. Another feature of interest is the cloth impression surface on the side of the tire next to the rim, to which the cement adheres better than to a smooth surface. Advantages are claimed for the cover of the "League" tire on account of its elasticity and its somewhat flattened shape when the tire is deflated, the latter feature making it easy to "true" on any crescent rim. A feature of this firm's trade is the sale of inner tubes for tires, boxed separately, each bearing the name of the firm. "League" tires are fitted with the Schrader valve, which is new and made with the much-desired universal thread. These tires are made in regular weights, and for "road" and "track" racers.

LEAGUE TIRE.

THE COVER.

BRADY'S SAFETY WIRE CUTTER.

THIS cutter is made of steel drop forgings, the cutter blades being drop forged, of the best tool steel. The parts are all interchangeable making it always possible to replace broken or worn out portions. The cutter blades are so constructed that as they are ground away in sharpening they can be set around one notch at a time and this repeated until the blade is used up, when a new set of blades can be inserted and this can be repeated indefinitely as all other parts are practically indestructible. The handles are thoroughly insulated, being made of the best quality of vulcanized fiber. Manufactured by James Brady, 83 Washington street, Brooklyn, N. Y.



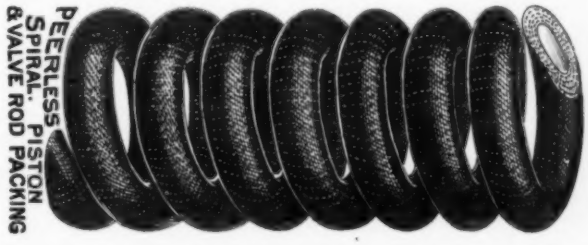
THE CLEANFONT RUBBER NIPPLE.

A HOUSE that has given the trade many valuable specialties in rubber has just put this new form of nipple upon the market.

The special advantages which are claimed for it are that it is so made that there are ribs inside of it, therefore it cannot collapse; it is seamless and in no danger of splitting; it is made of pure rubber, is very durable and is low priced. They further claim that it far outranks any "pull over" nipple ever produced. Of the two illustrations one shows an outside view of the nipple and the other the interior ribs and the beads which fit it to the top of the bottle. Manufactured by Fox, Fultz & Webster, 18 Blackstone street, Boston.

THE PEERLESS PISTON PACKING.

PACKINGS of this kind have usually been made straight and engineers have most emphatically protested against the trouble they have been put to in crimping them. The Peerless does away with this, and all the engineer has to do is to cut off the right length and put it in place. This is really made of the



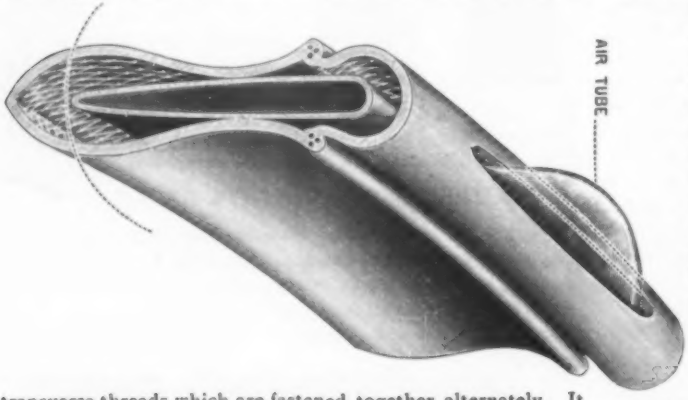
stock of the well known Peerless Piston Packing but appears in a new and more convenient shape. It has the red core of "rainbow" stock and is carefully tested to hold 300 lbs. of steam which the Company guarantee. This is made especially for high speed engines. It is put up 12 feet in a box. Manufactured by the Peerless Rubber Mfg. Co., Warren street, New York.

THE GEM PEDAL NO. 2.

IN a recent issue we illustrated what was known as the Little Gem Pedal, and in order to completely cover the subject we now show the Gem No. 2. It is made from one blank of sheet steel and has detachable rat trap cleats thoroughly hardened and tempered. It can be made either a rubber or rat trap pedal by the presence or absence simply of the rubber center. The bearings are detachable and so constructed that the balls are always revolving in oil, one supply outlasting the entire season. It has also a device whereby the balls are retained when the axle is removed and is absolutely dirt and dust proof. Manufactured by The Warwick & Stockton Co., Newark, N. J.

THE DURYEA PNEUMATIC TIRE.

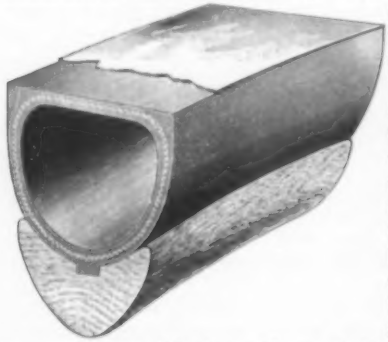
THE concern manufacturing this tire have already made an enviable reputation in other lines of rubber goods, but for a long time have been looking for what they considered a perfect type pneumatic tire. They are at last satisfied and are giving the trade the Duryea. They claim for it not only the best wearing rubber compound, but a perfect fabric, with perfect fastenings. In a few neatly put paragraphs they say that it has no creep, no roll, no glue, no flaps, no rags, no strings, no tools, but has a self grip. It will fit any rim, either wood or steel, no matter whether the shape be concave, convex or flat. The fabric consists of



transverse threads which are fastened together alternately. It is thus flexible, and yet the threads do not saw on each other, hence, it is faster, easier and more durable. They do not claim that it is punctureless, but do claim that it resists punctures wonderfully. It doubles back a point when running over it and grips it, which is the result of its great flexiblity. The fastening is of endless piano wires with a tensile strength of 200 lbs. to the square inch. These are of the very smallest size, spring tempered and absolutely without stretch or danger of kinking. While the air tube is always within the shoe, protected from damage when off the rim, one second will expose it to the repairer's view. Manufactured by Indiana Rubber & Insulated Wire Co., Marion, Ind.

A STEEL-ARMORED BICYCLE-TIRE.

OUR report last month of the tires at the New York cycle-show gave the palm for novelty to an invention by E. T. Pickett, which is illustrated at this place. Ever since India-rubber tires of any kind have been in use there have been efforts made to prevent the wearing of the rubber by some means which would not rob the tire of elasticity. Some of the English patents in this line are very curious, but none has proved practical. With the pneumatic tire the need of protection is largely increased, and it has remained to this time for the suggestion to be made of a flat bearing surface encircled its full width by a thin band of steel, so flexible as not to interfere with the resiliency of the tire. Besides affording protection against puncture, the inventor believes that he has largely reduced the road friction. "Experiments show that metal in contact with other surfaces will cause 25 per cent. less friction than rubber in the same capacity," say the manufacturers; "so we find that a rubber bearing produces more friction, or, in other words, clings tighter to the road than is required." Correspondence in regard to this tire is invited by Warson & Pickett, No. 24 Erie street, Buffalo, N. Y.



INDIA-RUBBER FLOORING-TILES.

A NEW and pleasing use of India-rubber is in the form of tiles for floors for public buildings, where it has been found to fill all the requirements as a substitute for marble or any other material yet tried. Rubber tiling is durable, it is sufficiently yielding to the tread to make walking over it more pleasant than on other tiles, it is comparatively noiseless, and it is capable of being made as attractive in appearance as any other flooring now in use. In the first place, the rubber may be cut into any desired size or shape, while its elasticity permits the tiles to be laid so closely together that they practically appear to be all of a piece. Several colors can be employed, so that, with proper attention to designing figures or shapes, an endless variety of effects may be produced in rubber tiling. The Gutta-Percha and Rubber Manufacturing Co. (New York) have lately done some very attractive work of the kind here referred to, and are in a position to submit estimates wherever orders may be intended.

THE ASBESTO-METALLIC PISTON PACKING.

THIS packing is designed particularly for high pressure engines. It is semi-metallic combining the best qualities of fibrous and metallic packing. It is composed of a well-known gum core non-vulcanizing rubber, covered with a braid of soft asbestos thread, the whole being covered with another braid of flax and wire. It is said to be remarkably durable and wonderfully efficient. By the use of the asbestos thread the packing cannot be destroyed by burning, which is one trouble with ordinary fibrous packings where either flax or hemp are used, while the use of the wire cover prevents mechanical injury which might possibly occur from the asbestos coming in direct contact with the rod. This packing is the result of the most careful and conscientious experimenting and has already found many friends in the trade. Manufactured by the American Steam Packing Co., Kilby street, Boston, Mass.

"ROYAL" FOOT-FORM HALF-SOLE.

WHILE rubber overshoes perform a service under certain conditions which cannot be supplied by any substitute, there are occasions when a non-slipping or a waterproof-soled shoe is desired, but when the overshoe as ordinarily constructed is not needed. Many efforts have been made to design something satisfactory in this line, and India-rubber usually has been one of the materials used. The attention of THE INDIA RUBBER WORLD was called to the rubber half-soling device which is here illustrated by a salesman in an immense sporting-goods house,

RUBBER HALF-SOLE.

where it appears to be highly thought of. The surface of the rubber half-sole which is to be laid against the leather is supplied with a coating of cement which helps to hold it in place, while the attachment is strengthened by driving a few tacks through the rubber into the shoe-sole. Besides protecting the feet from dampness and the shoe from wear, these half soles prevent slipping and are said, on account of their elasticity, to render walking less fatiguing by decreasing the effects of concussion. They retail at 50 cents a pair. Manufactured by the Royal Foot-Form Sole Co., Nos. 159-161 Lake street, Chicago.

THE SMITH ADJUSTABLE GASKET.

AS will be seen by the illustration the Smith Gasket is oval in cross section which allows it to conform to more than its own shape. It is indeed shaped and adapted for all irregular forms of man and hand hole and is especially advantageous for plumber's use. The eight regular sizes of manhole and fourteen of handhole are sufficient to enable it to conform to all the sizes required. In speaking of any special gasket it is always wise to give directions for its best use. The manufacturers of the Smith say,—never screw the gasket down too hard but allow it to expand with the heat, then if necessary, tighten a little; coat with plumbago before applying and one will never be troubled by its adhering and it may thus be removed at any time. Manufactured by the Seamless Rubber Co., 55 Daggett street, New Haven, Conn.

DR. SEIBERT'S RUBBER STOPPER.

THE physician whose name appears in the heading is one who is an expert and inventor in the line of infant feeding and apparatus therefor. His graded infant feeder and sterilizer is something known the world over. The principle in it that interests the rubber trade particularly is the grooved rubber stopple used in the various bottles, the groove allowing the escape of surplus steam while the sterilizing process is going on. Manufactured by Eimer & Amend, 205 Third Avenue, New York.

A REALLY NEW THING IN SPRINKLERS.

THERE is now on exhibition in New York something really new in hose attachments, involving what the discoverer calls the ball-nozzle principle. Some time ago Charles V. Pollock, of Des Moines, Iowa, while experimenting with an ordinary lawn-sprinkler having a bell-shaped nozzle, found that a small potato placed loosely in the nozzle, without anything to hold it in position, would resist the pressure of the water and create a spray. For a potato he substituted a glass "marble," and finally a rubber ball, each yielding the same results, except that the rubber proved to be the best material. Why the ball remains against pressure, seemingly with nothing to hold it, and regardless of the position in which the hose is held, remains a mystery, but without troubling himself on this point, Mr. Pollock has been searching out practical uses for his invention.

First of all the success of the ball-nozzle for lawn-sprinkling use was established. Next the attention of the chief of the Des Moines fire department was attracted by the device, and it was speedily adopted with the most satisfactory results. A great advantage claimed for the ball nozzle as applied to fire-hose is that the spray created will speedily rid a room of smoke, which often operates to repel the firemen and prevent the saving of life. Many other practical uses have been pointed out for this device, not the least of which is its value in connection with ventilation. A ball placed in a bell produces the same effect against the pressure of air as it does against the pressure of water. Thus it may become an important feature in sanitary regulation for disseminating disinfectants and fresh air in close rooms and unhealthy places.

In connection with Webster Bishop, also of Des Moines, Mr. Pollock has formed the American Ball Nozzle Co., who are now engaged in an original and attractive manner in showing the advantages of the new device to the public. The entire first floor of one of the largest buildings in New York—Nos. 837-847 Broadway—has been leased for four years for this purpose. An acre of floor space is given up to a free exhibition, to which people are attracted by pictures and other decorations, live plants, an extensive fountain of water, and, at night, a brilliant electric illumination. The president of the company is C. F. Meek, formerly general-manager of the Union Pacific railroad, who is giving his personal attention to exploiting the new article.

Messrs. Pollock and Webster have been for years connected with the extensive hardware house of J. D. Seeberger of Des Moines, where the discoverer of this new principle had become familiar with the properties of India-rubber. This fact led to his early adoption of rubber balls for the nozzles, and helped him to get into communication with the leading rubber-manufacturers. Experiments having shown that a grooved ball in a sprinkler nozzle would make a wider spray than a smooth ball, one rubber-manufacturer has shown great ingenuity in molding hard-rubber balls "loaded" with a leaden bullet in such a manner as to keep the ball in a given position, thus giving the grooves at all times the same effect. Thirteen different patents have been issued to Mr. Pollock to cover the various applications of the principle discovered by him.

In the illustrations will be seen a wire hood meant to keep the ball from becoming lost when not in use, but not for any other purpose.

* * *

IN answer to the question why the ball stays in, a correspondent of the New York *Sun* writes: "The action of the ball in the new fire-hose nozzle is only seemingly paradoxical. It is described and explained in all standard works on physics, as in Ganot, page 163 (1881). It is due to the aspirating action of the jet of water extracting the air from between the surfaces of the ball and the bell shaped socket. The atmospheric pressure on the other side of the ball is then sufficient to hold it in place."

THE CLOSE OF THE SEASON IN RUBBER FOOTWEAR.

IF the popular adage about March should prove true this year, the leonine ending of the month may yet reconcile the manufacturers of rubber footwear to the "open weather" which has prevailed during so great a part of the season. One of the peculiarities of this trade is that the most favorable weather reports for it are of the kind which fill the soul of New York's street-cleaning commissioner with despair. Up to date the winter of 1894 95, considered from this standpoint, has not been a great success. Even where snow has fallen it has not always been accompanied by those conditions which create a widespread demand for rubbers. Especially has there been a complaint of a lack of those drifting snowstorms in New England which help the sale of heavy goods. But it is possible for March to strike a happy average in the point of "rubber weather," for the breaking up of winter sometimes makes this the most inclement month of the year. It is of interest to notice estimates which have been made of the value of a single storm to the rubber-shoe trade. The first heavy snow of the winter was described in the financial columns of a Boston newspaper as "worth $250,000 to the United States Rubber Co.," and just before the declaration of the common-stock dividend which is payable this week, there was a storm of which some investors in the shares remarked: "If it hadn't been for this storm, there might be a 2-per-cent. dividend. With the storm, it will be 2½ or 3 per cent."

Other conditions than the state of the weather have contributed to the present dullness of the trade, which has stopped production at most of the factories for a longer period than would be necessary for ordinary repairs. For instance, there are reports of the unfavorable effect of the poverty of the west. But it is only natural that the effect should be felt now of the large production of goods last summer, when, under the stimulus of an extra discount, jobbers placed an unprecedented number of orders early in the season. The shut-down of the mills which, six months ago, was freely predicted for an early date, did not occur until February, showing that supplementary orders were coming in during more than half the winter. The capacity of the factories, by the way, has become too great for all of them to be kept busy the whole year. An official of the United States company is authority for the statement that the mills which they control could produce during a year $5,000,000 worth of goods in excess of the present rate of demand upon them.

With an excessive mill-capacity, and a demand dependent upon an element so uncertain as the weather, it is a fortunate circumstance for the manufacturers that they are able so to gage the situation as to stop production whenever the trade is supplied. Formerly, the rubber-shoe companies, not working in harmony, were not able to do this, and the result in some years was that an inconveniently large surplus of goods had to be carried over to another season, with a bad effect upon the profit-and-loss account. Doubtless the ability to control this element of their business is proving the most beneficial feature, to the manufacturers, in their present system of combination. It is the general testimony that stocks are now small, in the hands of both jobbers and manufacturers. When the factories begin work again in earnest they will have a whole season's demand to meet, with a prospect of corresponding profits, and the ability to give the operatives a long term of employment. A great advantage of not beginning a new season with large stocks is that the factories can the more readily turn out new styles of rubbers as the demand arises. The selling trade also is in a healthier condition when stocks are frequently replenished, thus guarding against possible heavy accumulations and permitting dealers to keep in touch with changing fashions.

Wearers of rubber shoes are constantly becoming more discriminating, and they are concerned not alone with price and quality, but with shape and appearance. The demand now is for rubbers that will neatly fit any shape of leather shoe. Nor are people content any longer,even for health's sake, to wear rubbers that are uncomfortable. If they need something merely to keep the soles dry, or to prevent slipping on icy streets, they are not willing to wear a cumbersome covering that renders the foot too warm while disguising its shape. Already good progress has been made in the production of light and attractive grades of rubbers which mark as great an improvement in appearance upon the goods of our best makers of a few years back, as did their production upon the Pará overshoes of 1830. This new feature finds especial favor in the south, where heavy rubber footwear would be intolerable.

No steps have been taken as yet by the United States Rubber Co. toward adopting a suggestion made at its origin, with regard to an extension of the export trade in rubber footwear. It was to the effect that concentrated work in this direction might meet with greater success than had followed former attempts,and thus prove one of the most important results from the consolidation. It would seem reasonable that, with more factories than are needed to supply the home demand, one might be devoted to turning out goods especially suited to foreign markets. Of course it would be wasted energy to ship indiscriminately any surplus of rubber shoes of the ordinary styles which might be left on hand at the end of a season. But the author of the suggestion referred to, when asked about it lately, said that the management had been too busy in developing the details of the consolidation with relation to the home trade to give the attention which would be required for studying the peculiar wants of different countries abroad, and creating the equipment of lasts, etc., necessary for an export department.

All the factories now closed probably will be in operation by April 1, the date of the beginning of the rubber-shoe season. Those factories which produce other lines of goods in connection with footwear are busy in all but the shoe departments. One factory, which is supplying the tennis-shoe trade, instead of shutting down, finds itself now in the height of the season. On April 1 the new price-lists are due, and naturally orders during the rest of this month will be limited strictly to current wants, although it is not believed in the trade that any important change in prices will be made. The opposition which the existing list met in certain quarters at the outset has well-nigh died out, and the trade has become adjusted to the new conditions. It remains to be seen, however, whether the periodical rumors that some of the abundant unemployed capital in the country is to be invested in rubber-shoe making will have any effect upon the present leaders in the trade with respect to reducing prices.

THE Farrel Foundry and Machine Co., (Ansonia, Conn.) have decided to build a new roll- and machine-shop and have placed the contract for the building with the Berlin Iron Bridge Co., of East Berlin, Conn. The building will be 104 feet wide and 260 feet long, constructed entirely of iron, brick, and glass. The roof will be of copper.

CONDITION OF THE RUBBER-HOSE TRADE.

THE season in the rubber-hose trade has opened with a condition of activity and of hopefulness on the part of manufacturers. The latter feel encouraged by the shortage of stocks in the hands of dealers, which is in marked contrast with the situation two years ago. Another reason for assurance is based on the experience of 1894, which was an excellent year for the trade, despite the widespread complaint of business depression, showing that rubber hose has come to be regarded as a staple rather than as a luxury, and that its sale may be looked for in "good" and "bad" years alike. In addition to these considerations, the leading makers of hose are led to look for a good business this season by the character of the orders already received. The traveling men, who are now out in full force, report good success, while dealers in goods of this class are being heard from in liberal fashion. Of course, the belief that improvement in the general business situation is in progress is not without its effect in rendering the hose-men, in common with other classes of manufacturers, more cheerful.

There can be no accurate forecasting of the demand for small hose, which is gaged largely by the proportion of dry weather during the summer months in the towns where facilities exist for watering private grounds. The establishment of water-works in any town is likely to be followed at once by a demand for hose from house-owners, but all of them do not buy at once. The tendency is rather to wait until the parched grass on lawns emphasizes the need of water. Should the summer begin with a period of drought, it is a good stimulant to the hose trade, but if the dry weather should be postponed until the later months of summer, people without hose are apt to conclude that it will be as well to buy next year. Thus the introduction of garden hose in a new town is gradual, giving rise to a demand that increases year by year and is swelled in time by the need of renewals in the case of the earlier purchasers. A dry season is always welcomed in the hose trade, and one exceptionally dry is likely to extend the period of activity at the factories, which ordinarily lasts from October to May.

It is not the experience of manufacturers that the demand for garden hose in a given town comes gradually to be for a better quality, as is the case with fire departments, for example, which soon learn the faults of a cheap grade, and try to avoid them when buying again. On the other hand, buyers of small hose generally seem ready to buy a cheaper article, without respect to quality.

In some cases the erection of water-works in towns has given little encouragement to the hose trade. Rochester, N. Y., is mentioned particularly as a type of the places where, in order to conserve a limited supply of water, the charges are purposely fixed so high as to check its use for sprinkling. Even in New York city the water-rates are such as almost to prohibit the use of hose in connection with residences. There are very many citizens who will permit their front areas to remain unwashed, except by the rains, rather than pay $5 a year for water for the purpose.

One class of buyers of hose from whom little is expected this year includes the purchasing-agents of the railway companies, who for some time past, as everybody knows, have been limiting their orders for supplies of every kind to the lowest possible degree. A rubber-manufacturer reports that the purchasing-agent for one important railway system, who formerly kept on hand a considerable stock of the supplies likely to be required, now has orders to buy nothing except on requisitions telegraphed to his office in New York. Among the articles which are not ordered until the last minute, and then only in the amounts actually needed, are the various grades of railway hose, the most important of which is that used in the air-brake system.

As for fire hose, the demand is influenced neither by the seasons nor by the conditions of business. The sale is steadily on the increase, and the manufacturers assert that the tendency is toward improvement in the quality of the product, in order to meet the requirements of the trade.

THE SEASON IN MACKINTOSHES.

SPRING styles in mackintoshes in the American trade are showing little that is novel. Fashion in fact, has not the full sway in respect to these goods that obtains in the making of most other garments, whether for women or for men. The fair sex must be named first here, because they buy more mackintoshes than their husbands and brothers do, and because more attention is required to satisfy their tastes in style, material, and color. One reason why makers of mackintoshes do not copy the ultra-fashionable changes in tailor's styles is that the nature of the material used does not lend itself, particularly in women's garments, to any but the simpler effects in trimmings. Another is that a narrower range of colors is available in a garment that is essentially for wet-weather use. But the most important is that, while styles in other clothing vary with every season, the same mackintoshes may be worn for two or three years, or as long as they preserve their appearance; hence, those styles in cloaks and coats are copied which seem least liable to change.

With so many manufacturers in the field, working independently, it is not always possible to decide what styles are in the lead at any given date. But it seems that for the spring trade in men's coats nothing new in styles is offered, while in women's garments the tendency is toward fewer capes than have been in favor for some time, two capes being preferred to three. The golf-cape mackintoshes do not seem to be so popular this season, and the hooded garments may be expected to disappear from the trade.

The great demand for plain blacks and blues is due to the call which has existed for black and blue clothing of all kinds, which are now asked for in a lessening degree. Some important manufacturers, however, continue busy in turning out mackintoshes in solid colors. It is at least certain that the tendency is toward quiet tones—what may be described, for instance, as slight variations on the plain. Checks and plaids have had their

run, and striped goods as well. Some very pretty new cloths are shown, woven with fancy yarns, affording a flecked appearance. Some new mackintoshes for ladies made with velvet collars, are meeting with much favor.

It may be said that spring as a distinctive season scarcely has an existence in this trade. This year, particularly, the buying has continued without interruption through the winter and up to the present time, with little difference except that goods of lighter weight are demanded now than in the winter. Some houses report that the season has not brought enough rain, in many places, to encourage buying, and this is a department of trade which is about as sensitive to weather influences as the rubber-shoe business. It is for this reason that mackintoshes have come into good demand in recent years on the Pacific coast, where periodical rainy seasons occur. No appreciable effect, it is claimed, has been caused in the mackintosh trade by the late tariff legislation by congress. The changes in duties were slight, being in the nature of an increase on the higher grades of goods, and a slight decrease on others, but prices have not been varied in consequence, one way or the other.

HEARD AND SEEN IN THE TRADE.

COLLIS P. HUNTINGTON was quoted in the New York *Herald* lately as making some remarks in regard to India-rubber that amazed the trade, to say the least. "If I were young and had $100,000," the interview ran, "I would go at once to the Kongo Free State and buy rubber. Over across the mountains you can buy it crude for a cent a pound. To get it down to the coast for shipment you would probably have to pay a cent or two more. The natives will carry it over on their backs for that price. It doesn't cost much to ship it to New York, where you can usually count on about $1 a pound. It's an adventurous sort of business, but I know of nothing that will pay better. I'd be worth a million in ten years if I were a young man and could start with $100,000."

"Mr. Huntington needn't wait until he is young again to make another million, and he can avoid the adventuresome part of the business, too," said Hermann Reimers. "We will sell him the rubber right here for 40 cents a pound, and let him make 60 cents profit, if he can sell at a dollar. And he can begin the business with less than $100,000."

Somebody else remarked that, in order to keep young men with $100,000 in loose change from rushing to Africa to buy rubber, it ought to be mentioned that the Kongo government charges an export duty of 8 cents a pound on rubber, and that it costs $200 a ton to transport it around the falls on the lower Kongo river, which is only a small part of the distance to be covered. It is to lessen freight charges around the falls, by the way, that they are building the railroad toward which Mr. Huntington once subscribed $50,000. He told THE INDIA RUBBER WORLD at the time that his interest in the Kongo was only a charitable one, and it appears that he was never called upon to pay his subscription.

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LATER I asked Mr. Huntington for some details with reference to his interest in Kongo rubber. "I have none," he said. "I know nothing of the interview with me in the *Herald*. I never could have said anything of the kind. I know so little about rubber in Africa that I would no sooner advise any one to invest money in the industry than I would advise him to make investments in the moon."

* * *

THE consolidation of two of the largest export firms of New York—hereafter to be known as Flint, Eddy & Co.—and the fact that the member first named has such important relations with the chief rubber-producing country, prompted a question as to the probable effect upon the India-rubber trade of New York. "No more effect than if you should become an incorporation to do newspaper writing," said a rubber broker. "It is an important movement in the commercial world, of course, and will tend to stimulate our international trade, but in the way of increasing exports rather than imports. Existing facilities will bring to New York all the crude rubber that the trade demands, no matter where or by whom the shipping is owned or the capital is controlled. As for the rubber required by Europe, it is natural that it should continue to go direct across the Atlantic, instead of first coming to New York." At the same time there can be no doubt that, in a country sending us products in such large volume as Brazil does, for instance, an enlarged market can be found for North American goods if the necessary effort is made. Why should Europe control the exchange of rubber we use for cotton goods which Brazil wants?

* * *

NO special concern seems to be felt in the crude-rubber trade over the extensive combination of interests, under the name of the Brooklyn Warehouse and Storage Co., which has gained control of the greater part of the storage facilities along the Brooklyn water-front. An importer of India-rubber said: "We have been storing our consignments with the firms now in the combination, and there is no reason to suppose that the new arrangement will make any difference to us. They will hardly venture to raise their rates, which are already so high that any increase would drive shippers to seek storage on the New York side of the river. But they are excessively capitalized at $30,000,000, and I don't see how they can earn dividends at the existing rates. The rubber importers have never erected warehouses of their own, on account of their varying requirements for storage. Sometimes heavy cargoes must be stored, after which, for a long interval, there may be little warehouse room needed." The offices of the new company are in the Morris building, at Broad and Beaver streets, New York.

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"THERE is no telling how widespread is the final distribution of our goods," said the president of a rubber-manufacturing company. "Besides going to every part of our own country, some of them reach far beyond. Of course exports form only a small element of our business, but there is scarcely a day when we do not have a call for some article to be sent abroad. We sell such goods to commission merchants here, for cash, and often do not know in what country their correspondents may live. The goods are sold without effort on our part, and we have no shipping details to watch and no long credits to consider."

* * *

PUBLIC officials would be much better customers of the rubber-manufacturer if their requisitions for office supplies were not, in most cases, pruned down by somebody in authority before the goods are ordered. The New York city government lately invited bids for stationery, including rubber articles, for all the departments for one year. Of rubber bands 5162¾ gross were called for, and the only bidders were the L. W. Ahrens Stationery and Printing Co., at $3475.45. The same firm have been supplying rubber bands for several years, in constantly-increasing amounts, the increase of their bid over last year's bill having been $500. Supervisor Kenny tells me that if the city

officials had been allowed all the bands they asked for, $10,000 would not have paid the bill. The Manhattan Supply Co. were the successful bidders, at $142.21, for 2391 rubber erasers.

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THE American Wringer Co. manage to do business without making much noise about it, but there seems to be no doubt that the results up to date have justified fully the basis upon which the big combination in wringers was formed some four years ago, and the choice of men made to conduct its affairs. There are certain limitations of climate which prevent the demand for clothes-wringers from becoming worldwide, but where these machines are used, the demand increases as to both the number and the quality ordered. It is worth noting, in these days of falling prices, that a new wringer, lately put on the market at an advance of 50 per cent. on the standard list, is in good demand. The reason is that the rolls are made of fine Pará rubber, rendering them very soft and therefore more effective, without being less strong or durable than other rolls.

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APROPOS of a talk I had last month with a manufacturer respecting the succession of crazes in the rubber trade, I asked a gentleman who is a native of Scotland, and who is interested in seeing the royal and ancient game of golf introduced in his new home on this side of the Atlantic, what the demand for balls amounted to in the old country. His reply was: "I suppose that there are 300 golf-clubs in Scotland, with an average of 150 members, or a total of 45,000 golfers. Now, allowing for balls which are lost, or broken, or knocked out of shape, and for the fact that some of these golfers play seldom, one dozen balls apiece for the season I consider a proper estimate. That would give 540,000 balls a year for the Scotch demand. I suppose that you might set down twice as many for England, which is a larger country than Scotland. By the way, I think that golf will become the leading game in the United States. I hear of new clubs being formed all the time."

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THE last remark was overheard and endorsed by a Chambers-street dealer in fine harness who, for the past three or four months, has been introducing the golf goods of a house in Birmingham. "What do you think will be the demand for Gutta-percha balls here this season?" I asked the dealer. "I think there'll be a million sold," he said. "I'm selling a gross or more every week, and this is not the season for playing."

THE MAN ABOUT TOWN.

TRADE AND PERSONAL NOTES.

THE first of May, the Commonwealth Rubber Co., of New York, will open a retail store at 2 Astor House, Broadway, near Vesey street. This department will be under the charge of E. W. Holt, well known to the rubber trade of New York. The wholesale department will remain at 54 Vesey street.

—The Franklin Rubber Co., wholesalers and retailers of rubber goods at 12 Franklin street, Boston, have begun the erection of a small plant in the vicinity of Malden, Mass. They intend to make cravenette garments and will employ about seventy-five hands.

—The blotting pad made of asbestos paper is a recent novelty that Ed. Wertheim & Co., the well-known German-American asbestos house, are sending out.

—There are in the United States about one thousand rubber stores and a correspondent writes inquiring why they do not take hold of the market of bicycle tires, which question we respectfully refer to the rubber stores themselves.

—The Eastern Electric Cable Co., whose plant has been spoken of in THE INDIA RUBBER WORLD, have lately put in one of the best furnished machine shops that any rubber plant can have. As is well known, President Clark, of the company, is an inventive genius, and is constantly bringing out new machines both for his own work and in other lines.

—The Denver Rubber Co. in a recent letter to THE INDIA RUBBER WORLD intimate their desire for correspondents from rubber manufacturers for the introduction of rubber novelties throughout Colorado, Wyoming and New Mexico. They are engaged exclusively in the rubber business as jobbers. R. A. Kincaid is the manager.

—Mr. A. Straus, manager of the Newton Rubber Works, in reply to the question, asking the cause of the pneumatic tire's resiliency, says the least space between the two winds gives the best tire. That is, the thinner the wall of the tire the greater its elasticity.

—The Rubber Manufacturers' Mutual Insurance Co. have had new and handsome offices fitted up for them at 31 Milk street, Boston. Secretary Taft calls them the finest insurance offices in Boston. At the meeting of the company the old board of directors was reëlected.

—The New Jersey Car Spring Rubber Co. are having a decided run on their cotton garden hose. The fabric of the two brands they have used is made of carefully selected long fiber cotton while the rubber lining is of excellent quality, and made under what is known as the "perfection" plan, a special invention of this company. It consists in running the tube in three or more plies, so that in case of any defect in one layer, it is remedied by the others.

—The Hope Rubber Co., Providence, R. I., one of the stores owned by J. Francis Hayward, was recently damaged in stock to the amount of $500 by the bursting of water pipes.

—The Boston Belting Co. have just put in two one thousand-gallon fire pumps made by The Henry R. Worthington Co. These pumps were specially designed for the Belting Co. and are said to be the finest yet made.

—Frank O. Clement, of Manchester, N. H., informs a local newspaper that he has a hundred men, in New Hampshire, Vermont, and Maine, gathering old rubbers for him at the rate of 2000 pounds a day, and that he expects to handle 300 tons this season.

—Miss Annie Connolly, a young employé of the Boston Rubber Co., by her promptness and presence of mind in sounding an alarm of fire the other morning, probably saved the factory from a heavy loss.

—The St. Paul (Minn.) Rubber Co. have amended their articles of incorporation so as to permit of the election of a greater number of directors than three. Jacob Hammer is president of the company and Herbert N. Hodgman secretary.

—The Newton Rubber Works (Newton Upper Falls) have been compelled lately, by the rush of orders, to run four nights in the week.

—The incorporation of Lawton & Co. is reported from Louisville, Ky. Their business is the manufacture of rubber stamps and similar goods; the incorporators are S. C. Leppelman, James Steel, and A. L. Holgate; and the capital mentioned is $30,000.

—The Amazon Steam Navigation Co., Limited, the annual meeting of which will not occur until June, declared lately a dividend of 3 per cent. on account of this year's business, which was payable on and after January 2.

—The city of Macon, Ga., has placed an order with the Gutta-Percha and Rubber Manufacturing Co. (New York) for 4000 feet of fire-hose of the Baker fabric brand. At a recent fire in that city 700 feet of the old hose was burned or injured by bursting.

—The annual meeting of the Canadian Rubber Co. was held at Montreal on January 31. Andrew Allan, H. M. Allan, Andrew A. Allan, W. H. Benyon, J. B. Learmont, Hugh McLennan, Arthur Prevost, Francis Scholes, and W. Withall were elected directors. Subsequently the officers were reëlected, viz.: Andrew Allan, president; Hugh McLennan, vice-president; J. O. Gravel, secretary-treasurer; J. J. McGill, manager.

—The Portland Rubber Co. are a new concern organized at Portland, Me., to manufacture and deal in rubber goods. James Aiken (Franklin Falls, N. H.) is president; Allen Shedley (Portland) general manager; and Edward G. Woodford (Portland) treasurer. The amount of capital named is $30,000, of which $18,000 is paid in.

—The Monarch Rubber Co. (Campello, Mass.) continue to increase their facilities for work. They are putting in four new spreading-machines and have ordered a 300 horse power engine. The factory contains three heaters, each holding from 1500 to 1800 yards of cloth. An addition to the buildings is talked of for the spring.

—The statement comes from unofficial sources that the "Alice" and Millville Mills of the Woonsocket Rubber Co. will be running, probably in full, by April, and may start in part before that time. This will be welcome news, especially to the operatives at Millville, who had held a public meeting and appointed a committee to consult with the rubber-manufacturers about the date for resuming work.

—A small blaze in the office of the Housatonic Rubber Co. (Bridgeport, Conn.), which might have become a big one but for the promptness of the firemen, is believed to have been caused by rats fooling with a box of matches.

—The Diamond Rubber Co. (Akron, Ohio) are preparing for a removal into the large plant formerly occupied as a match-factory. Their success in the manufacture of bicycle-tires is understood to have been exceptionally good.

—Five important India-rubber concerns have filled orders for supplies for the American Ball Nozzle Co., whose new device is described in another part of this paper. Some of the work required of the rubber companies has been of the most ingenious kind—for instance, the "loading" of the balls with lead.

—During the past week W. A. Walker, manager in New York for J. Mandelburg & Co., Limited, paid a visit to the factory of the firm in Canada, at Montreal.

—At the annual meeting of the Stoughton Rubber Co., in Boston, on February 19, a directory was elected consisting of Louis K. McClymonds and Arthur G. Walton, of New York; D. C. Marr and A. L. Lindsay, of Boston; and T. J. Skinner, of Wakefield, Mass. Mr. Carr was chosen president, and Mr. Lindsay vice-president, and Mr. Skinner was reëlected treasurer.

—Jas. F. Brook, of Trenton, has for the present relinquished his idea of starting a rubber factory and is devoting himself to mechanical engineering, having formed with his son, the Trenton Engineering Co.

—Mr. S. Reineman, salesman for the Home Rubber Co., Trenton, has started West with a full line of mechanical samples for an extensive trip.

—Mr. Welling G. Sickel of the United Rubber Co. is Republican candidate for mayor of Trenton.

—The Home Rubber Co. have just put in a large machine for stitching belts. It is of Singer make and embodies all of the latest improvements.

—Of the five factories controlled by the Rubber Reclaiming Co. but one is being operated, so it is said.

—The "Perfect Piston Packing" of the Quaker City Rubber Works, Philadelphia, is having a great run and accomplishing some remarkable results, so say the engineers.

—The plant of the Boston Car Spring Company, Roxbury, is being dismantled to make way for an over grade crossing.

—The Mechanical Fabric Co., of Providence, R. I., are making a very successful bid for proofing work. They have unusual facilities for this and indeed are experts in all kinds of rubber work, particularly in coating fabrics.

—Mr. Lewis Elliott, formerly Supt. of the Candee Rubber Co. for more than thirty years, has so far recovered from his recent indisposition that he is now an active member of the State Legislature, and when it is in session goes daily to Hartford from his home in New Haven.

—Mr. C. S. Knowles, the well known Boston rubber man, is responsible for an exceedingly interesting article in a recent issue of the Boston *Herald*, describing the saving of the crew of the schooner *E. H. Blake*. The adventure occurred during Mr. Knowles' recent trip to Jamaica.

—Mr. J. J. Voorhees, General Manager of the New Jersey Car Spring & Rubber Co., has been again elected President of the Board of Trade of Jersey City.

—The Newton Rubber Works, Newton Upper Falls, Mass., are exceedingly busy on bicycle tires, and are forced to run nights in order to fill orders.

—The annual meeting of the Alpha Rubber Co., Montreal, was held February 20th, and the following officers were elected: Russell Parker, President; William Strachan, Vice President; Alexander Macpherson, Secretary and Treasurer, the latter having the management of the business. A statement was submitted by the Secretary and Treasurer showing an increase of business for the year 1894 of about twenty-five per cent. as compared with the year 1893.

—Mr. George S. Willis has recently severed his connection with the Cornelius Callahan Co., the well-known fire hose manufacturers of Boston, and the Callahan Co. in a courteous circular are thus notifying the trade.

—The copartnership heretofore existing between Rhodes Lockwood and Philip C. Lockwood under the firm name of R. & P. C. Lockwood and the Davidson Rubber Co., has been dissolved by mutual consent. Business will be continued under the firm name of Rhodes Lockwood & Co. and the Davidson Rubber Co.

—Last month was mentioned the proposed reorganization of the Hudson (Mass.) Rubber Co., a concern in the mackintosh trade. The incorporation has since taken place, under the laws of Maine, the certificate bearing date of February 18.

—The city of Boston boasts of a new superintendent of streets—a Mr. Wheeler—who has started in to save money in the purchase of supplies for the city. As for rubber goods, he announces that all he needs will cost the city 20 per cent. less than heretofore.

—George S. Colton, of Easthampton, Mass., who is an extensive manufacturer of elastic goring and other elastic fabrics, has lately built an additional mill that will permit of a large increase in his working force.

—The National India Rubber Co. (Bristol, R. I.) are reported as turning out 3500 pairs of tennis-shoes daily, besides a large amount of mechanical goods and druggists' sundries. The number of employés was lately given at 1250 and the weekly amount of wages at $9500.

—Since the two English cycle-shows in December it is stated that forty-four new pneumatic tires have been placed on the market in that country.

--A new concern has been incorporated to make pneumatic-tired, ball-bearing vehicles—the Crawford Wheel and Gear Co., of Hagerstown, Md., with $100,000 capital. The head of the concern, R. S. Crawford, is also president of the Crawford Manufacturing Co., makers of bicycles at Hagerstown. There will be a New York office at No. 72 Reade street, in care of Lionel B. Whymper.

—A calendar for 1895 which has been distributed to the India-rubber trade and which is not likely to be carelessly thrown aside, bears the business card of James Boyd & Bro., No. 14 North Fourth street, Philadelphia, who are agents for the Boston Belting Co., the Eureka Fire-Hose Co., and the Eureka Packing Co. The twelve monthly leaflets are mounted in a handsome leather tablet; which may be preserved for the insertion of future calendars, but what is bound first to attract notice is a handsome and serviceable nickel clock in one corner of the leather mounting.

—The stock of boots, shoes, and rubbers of Willis J. Southard, at Oswego Falls, N. Y., has been disposed of at sheriff's auction. He lately confessed judgment to the amount of $3317.57.

—The various rubber-works and several other factories at Passaic, N. J., had to remain closed one day recently on account of the water-power being frozen up.

—The contract for furnishing 2000 rubber ponchos for the United States army, for which proposals were opened at the quartermaster's depot at Philadelphia on November 12, has been awarded to John H. Tissot, Jr., of New York.

—A recent idea of a New Haven inventor was to make copper lasts for rubber shoes by electrolysis. The result, however, was not satisfactory for the reason that copper and sulphur compounds of rubber always disagree.

—The American Tubing and Webbing Co., of Providence claim that their business has been wonderfully increased of late partly by the the superior qaality of their tubing, and partly by their action in sueing infringers on their patent rubber ends.

—The jury in the case of William Sauer, an employé of the United States Rubber Co., at New Brunswick, N. J., who sued that corporation for $10,000 for damages sustained in an explosion, awarded him $2500.

—The Foster Engineering Co., Newark, N. J., have just entered an order for two mammoth valves, 18-inch and 14-inch in size, intended for the Anheuser-Busch Brewing Association of St. Louis. These pressure regulators are of the new "Class W" style, and when completed will be the largest reducing valves ever turned out of their works.

ECHOES FROM THE RUBBER BANQUET.

THE rubber men were in the best of spirits and fraternized in a way that was delightful to see.

—When the Editor of THE INDIA RUBBER WORLD took a billiard cue for a pointer Walter S. Ballou remarked *sotto voce* that he could make caroms on a screen far more accurately than on a billiard table, a statement that he may be required to substantiate at an early date.

—Chas. S. Parker, of aluminum boot-tree fame, was there, as was also his brother, John H., but whether the latter wore "arctic socks" or "leather soled rubber boots," the scribe could not discover.

—Capt. Harry E. Converse, who had charge of the placing the company at the tables was in demand just prior to the banquet, and his unfailing good nature resulted in the formation of groups of friends at the tables, that prevented all feeling of isolation on the part of any one.

—The man who whistled when President Banigan spoke of water and mud in crude rubber, ought to buy some African gum and have it shrink 50%, in washing and drying.

—Was G. Alvin Scott, of the Boston Rubber Shoe Co., the man who visited South America with Mr. Banigan?

—Chester J. Pike, general selling agent Wales-Goodyear Rubber Co., intended to be present but was taken ill and thus prevented.

—To see H. E. Sawyer, of the Boston Rubber Shoe Co., W. S. Ballou, of the Woonsocket, and A. H. Stedman, of Geo. A. Alden & Co., playing "bottle pool" in the billiard room before the dinner was a liberal education in billiards. The man who got first shot usually spun the game out.

—President Foster said never a word about the "Glove Co.'s" shoes, nor did he wear white rubber gloves, as a friend tried to persuade him to do.

—In reply to a question the "Stereopticonist" desires to state that his mention of the Marvel Rubber Shoe was not a paid advertisement but the spontaneous appreciation of a good thing.

—Geo. H. Hood's invitation did not reach him until the day after the dinner owing to his absence from home on business for the Boston Rubber Co. To quote his own words: "Had I known about it I would have cut my trip short and attended without fail."

—That Costello C. Converse has not lost his interest in rubber was evident by his presence.

—F. F. Shaeffer insinuates that the rubber plant directly in front of him bloomed and bore fruit under the stimulus of the occasion, and further that the fruit was in the shape of a pair of tiny rubber shoes branded Goodyear's India Rubber Shoe Co.

—W. F. Jackson the rubber man of the *Boot and Shoe Recorder* was present as were also Mr. Geo. E. D. Putnam of the *Recorder*, E. D. Deming of the *Shoe and Leather Review*, Joseph Van Ness and various other good looking newspaper men.

—William Lincoln Sage, speaking to a prominent manufacturer of leather shoes said: "You people ought to feel under lasting obligations to the manufacturers of rubber shoes." "Why?" was the surprised inquiry. "Because their goods serve to hide the poor work that the leather men turn out."

—Chas. L. Johnson, director of sales for the N. I. R. Co., sent his regrets for being unavoidably absent, his recent experience with the grip rendering him necessarily careful.

TRADE PUBLICATIONS.

THE trade circular of the season that deserves to be described as unique bears the title "A Discourse on Cycling, With Especial Relation to the Sterling Bicycle." Written in the quaint style of two centuries ago, it is bound to attract attention by the excellence of its composition, while as a specimen of the typographic art and pictorial illustration it could hardly be excelled. There is nothing in the appearance of the pamphlet to suggest the trade catalogue.

—"Fine Rubber Goods" is the title of an elegant 80-page pamphlet describing the products of the Davol Rubber Co. (Providence, R. I.) These goods, for the druggists', surgical, and stationery trades, are listed under eighty-eight different titles, showing how extensive these branches of the rubber trade have become. Further subdividing, it may be noted that sixty-four items are listed under the single heading of elastic bands.

—We are in receipt of a price list covering embossed carriage drill and duck, in all styles and colors, rubber horse covers, men's double texture mackintoshes and enamelled cloth goods

in infinite variety. The circular and price cards are gotten up in a most practical manner to appeal directly to those interested and to give just such information as the buyer would be in search of. Published by the Cable Rubber Co., 28 Essex street, Boston.

—A circular which every recipient will be certain to open is sent out by the United States Gutta-Percha Paint Co. (Providence, R. I.) to call attention to their "Chinaline" finish, of which a specimen card of colors is enclosed.

—January 1, 1895, is the date of a Price-List of Vulcanized Rubber Goods for Mechanical Purposes of the Globe Rubber Works (Boston) of which Henry F. Knowles is manager. It is addressed particularly to the whole New England trade and covers the different varieties of railway and other hose, belting, fire-department supplies, etc.

—The Foster Engineering Co. (Newark, N. J.) have issued lately a pamphlet in which they describe, in terms which any one may understand, their pressure-regulating valves for steam-engines, together with a discussion of the weak points of devices of this class hitherto. Any person addressing them and asking for a copy of "Facts Worth Knowing" will receive the book referred to. As a testimonial of a high order to the efficiency of their "Class W" pressure-regulators, the firm report having supplied twenty-four of them to the new steamship of the American line—the *St. Louis*.

—The Penn Rubber Co. (No. 608 Arch Street, Philadelphia), a new concern whose incorporation was reported in this paper last month, have organized, with William L. Blodgett president and Edwin H. Chapman secretary-treasurer. Their first catalogue is a well-arranged 32-page pamphlet, covering cotton mill-hose, fire-department hose, garden-hose, wire-wound hose, steam-hose, brewer's hose, belting, packing, valves, mats, and carriage-cloth. Prices are given on most of the classes of goods catalogued.

—Catalogue No. 104 of A. G. Spalding & Bros. (New York, Chicago, Philadelphia), devoted to Spring and Summer Sports —Athletic and Uniform Goods, contains as many items of rubber as one might expect to find in the list of a good-sized rubber-manufacturer. Some of the goods in this catalogue have been made the basis of an article of some length, on another page, on the use of India-rubber in sporting goods.

—Steam users, whether on a small or a large scale, will be certain to find something of interest in the new catalogue and price-list of the American Steam Packing Co. (Boston), which embraces a large variety of mill and railroad supplies, but more particularly packing for every use, gaskets, and belting.

—"Pointers" is the title of a pamphlet descriptive of the "treated" fire-hose invented and manufactured by the Fabric Fire Hose Co. (New York). Its object is to show that waxed cotton, used in hose-making, will withstand more service and abuse than white or raw cotton.

RUBBER HOSE IN THE PUMP TRADE.

UPWARDS of a thousand pictures are employed to illustrate the new catalogue of pumps and hydraulic machinery of The Goulds Manufacturing Co. (Seneca Falls, N. Y.). This catalogue has steadily increased in size, since 1848, until the thirty-fifth edition fills a good-sized volume, in the best style of the printers' art. The firm named have favored us with a copy of this book, doubtless with the idea that rubber-manufacturers and other rubber-men are as apt as any one else, under certain conditions, to need pumps, and the variety here offered to select from is so great that it would seem that no want need go unfilled. Another thing, however, to commend this catalogue to the attention of the rubber trade is the evidence it contains of the extensive use of India rubber in the manufacture and use of pumps. First may be mentioned the use of rubber disks for the brass and bronze valves in pumps for a great variety of uses. Much depends, in the way of efficiency of the pumps, upon the employment of this material. But a much larger demand for rubber is due to the hose connections needed in so many cases. There are small spray-pumps, for fighting the insect pests which annoy the horticulturist, with their small, short sections of hose; there are also the irrigation outfits, for the arid western regions, with a capacity up to 30,000 gallons of water per hour, with enough hose attached to distribute this water over the farmers' fields. Between these two limits there is a wide range of styles of pumps in connection with which rubber hose must be brought. Naturally, therefore, one finds several pages of this book devoted to a price-list of hose and hose clamps.

A LITTLE BOOK ON THE RUBBER INDUSTRY.

IN a neat brochure entitled "The Rubber Industry of Brazil and Bolivia," sent out with the compliments of R. F. Sears & Co. (Pará), is contained a well-arranged summary of facts often asked for by buyers of rubber and others interested in this business. The methods of rubber-curing are described, together with the distinctions between the different grades of Pará rubber. In addition to the advantage of a long acquaintance with the business, the Messrs. Sears have availed themselves of correspondence with rubber-shippers on the Madeira and Beni rivers, which is acknowledged in the book.

INDIA-RUBBER CASES IN THE COURTS.

A SUIT in which the L. Candee & Co. appeared as plaintiffs, and which had attracted wide interest, was settled out of court at New Haven on February 26, just as it was about to be called for trial. On the night of July 8, 1893, a railway depot in New Haven took fire during a thunderstorm and hundreds of cars were burned, with a large quantity of freight which had been received for forwarding. The Candee company sued the railway company to recover $6000, the value of goods—rubber boots and shoes—which had been delivered to the latter. The defense set up was that there was no responsibility for the fire, which had been caused by an act of God. Hundreds of other shippers awaited the outcome of the trial before taking steps to recover their own losses. The basis of the settlement of the suit was 50 cents on the dollar, at which rate the railway company will settle with other claimants.

IN the suit of the American Dunlop Tire Co. *v.* The Erie Rubber Co., in the United States circuit court of the western district of Pennsylvania, Judge Buffington has rendered a decision supporting patent No. 488,494, issued to Alexander T. Brown and George F. Stillman, which the Dunlop company now own. This is a patent covering pneumatic bicycles-tires which is said to have been sold by the grantees for $100,000. The defendants made a tire under a patent issued to Joseph G. Moomey (No. 513,617), fastened to the rim by twine wound twice around the edge of the tire. The court's decision was based upon the fact that this cord, when under strain from the inflation of the tire, exercises a function similar to that of the endless wires in the edges of the Dunlop tire, and this constituted infringement under the claims of the Brown-Stillman patent as interpreted by the court. The defendants dissent from this interpretation, however, and have taken an appeal. In a letter

to THE INDIA RUBBER WORLD the Erie Rubber Co. say that the tire upon which the infringement suit was brought is not now made by them, and that it should not be confounded with the "Keystone" tire.

THE American Dunlop Tire Co. have begun proceedings against the Eastern Rubber Manufacturing Co. (Trenton, N. J.), in the United States circuit court. The bill of complaint charges that in the manufacture of the "Arrow" tire the Brown-Stillman patent (No. 488,494) is infringed upon, and an injunction and accounting are prayed for.

A DECREE has been entered in the suit of the Gormully & Jeffery Manufacturing Co. *v.* Philip W. Pratt, of the Elastic Tip Co. and the Eastern Rubber Manufacturing Co., in the United States circuit court in the district of Massachusetts. The suit is for infringement of four patents relating to wheel-tires (No. 454,115; No. 466,565; No. 466,789; No. 523,314), issued to Thomas B. Jeffery. The decree is for a perpetual injunction and for reference to a master to take and report to the court an account of the profits which have accrued to the defendant from the infringement of the patents named, since July 1, 1891. Payson E. Tucker was named as referee.

VALIDITY OF RUBBER-STAMP SIGNATURES.

ONE effect of the recent decision by Justice Gaynor, of the New York supreme court, that rubber-stamp signatures are not legal has been to recall an earlier decision on that subject by a member of the same court—Justice Lawrence. It seems that while Mr. Hewitt was mayor of New York city he affixed his signature to some requisitions for stationery with a rubber stamp. The validity of such signature being called in question, Justice Lawence decided that so long as the signer of a paper could swear that his name had been affixed by his own hand, it made no difference whether that hand had held a pen or a stamp. The mayor, by the way, testified that he suffered from writer's cramp, for which reason he had a rubber stamp for signing ordinary papers, which he kept carefully locked up to prevent its use by others. When it came to issuing city bonds, however, he took care that no question of their validity should be raised by signing them with a pen. So long as the oath of the signer of a paper is essential to establish the validity of a rubber-stamp signature, even under the most favorable decision yet rendered on this subject, it is not probable that such signatures will be affixed to papers of importance by many intelligent men of affairs.

The committee on accounts of the town of Brockton, Mass., it has just been reported, have declined to approve the bills of the school department because the superintendent's signature has been affixed with a rubber stamp. The school board have sustained Superintendent Russell, but the accounts committee contend that so long as a rubber stamp is used they have no absolute knowledge that the papers have been signed by the proper official, as anybody might buy and use a stamp.

A PNEUMATIC RUBBER FROG.

FROM England there has arrived lately a novel toy in the shape of an India-rubber frog, wonderfully lifelike in appearance and action, which is made to swim, when placed in water, by pressure upon the air-bulb attached. It can be made first to dive into the water, and then either to remain on the surface or to swim beneath. The frog may also be made to jump when out of water if placed on an ordinarily smooth surface. In the manufacture the coloring has been made to resemble that of a real frog, while the leg-movement has been admirably imitated. This toy is worked entirely by the action of the air, without any internal mechanism liable to get out of order. The price has been fixed at a figure which may be expected to commend it to the toy trade. The sale is in the hands of the Birnbaum Rubber Co., No. 47 East Twelfth street, New York.

THE Hodgman Rubber Co. are exhibiting at the International Exhibition of Costume, now open at the Madison Square Garden, a number of ladies' machintoshes of their manufacture, which they believe to excel in appearance and in the character of workmanship any goods of this class ever shown before.

REVIEW OF THE RUBBER MARKET.

DURING the month which has elapsed since our last review the condition of the market for crude rubber has been one of extreme quiet, being entirely without features of interest. Receipts have been good at Pará, and the movement from that port of the usual volume for the season, and in the absence for the moment of a heavy consuming demand prices have had a downward tendency rather than otherwise. A good part of the arrivals at New York have gone into stock, and there has been no pressure on the part of holders to sell. The expectation that the rubber-shoe industry will shortly become active again lends encouragement, however, to the crude-rubber trade.

Business in most lines throughout the country is dull, and the effect is more or less reflected in rubber circles, though it is the opinion of many who are well informed that perhaps the rubber trade is in as good condition as any other important branch, and probably better than the average. General satisfaction appears to be felt, in connection with the adjournment of congress, over the fact that business will be safe from any disturbing elements at Washington for several months to come.

The latest quotations in the New York market are:

Pará, fine, new t a	72	@73½	Sierra Leone	25@42
Pará, fine, old	75	@78	Benguela	47@48
Pará, coarse, new t a	48	@54	Kongo Ball	38@40
Pará, coarse, old			Cameroon Ball	36@37
Caucho (Peruvian) strip	49	@50	Flake, Ord. and Lump	24@25
Caucho (Peruvian) ball	52	@53	Accra Flake	15@18
Mangabeira, sheet	36	@40	Liberian Flake	26@27
Esmeralda, sausage	52	@52½	Primest Pinky Madr	60@62
Guayaquil, strip	36	@43	Madagascar, black	42@44
Nicaragua, scrap	50	@52	Borneo	26@45
Nicaragua, sheet	48	@49	Gutta-percha, fine grade	1.30
Thimbles	37	@38	Gutta-percha, medium	1.00
Tongues	35	@37	Gutta percha, hard white	85

PRICES FOR FEBRUARY (ISLAND RUBBER).

	1895.		1894.		1893.	
	Fine.	Coarse.	Fine.	Coarse.	Fine.	Coarse
First	72	50	66	46	78	55
Highest	70	50	67	47	79	56
Lowest	70	47	65	46	75	53
Last	71½	47½	66	47	76	53

In regard to the financial situation, Messrs. Simpson & Beers, brokers in crude India-rubber and commercial paper (New York), advise us as follows:

"There was very little change in the market for commercial paper in February, business having been exceedingly quiet. What little first-class paper has been obtainable was sold mainly at from 4 to 6 per cent., according to the financial strength. We quote as follows: First-class receivables, 4 and 5 per cent.; prime single-name, 5 and 6 per cent., at four to six months maturity, with the prospect that prices will remain so until business improves."

The statistical position of Pará rubber in New York and elsewhere is as follows, the figures expressing tons of 1000 kilo grams:

	Fine and medium.	Coarse.	Total.	Totals 1894.
Stock, January 31	500	66	566 =	929
Arrivals, February	639	257	896 =	1012
Aggregating	1139	323	1462 =	1941
Deliveries, February	496	234	730 =	842
Stock, February 28	643	89	732 =	1099

	1895.	1894.
Stock in England, February 28	960	985
Deliveries in England, February	460	630
Pará receipts, February	2520	2685
Stock in Pará, February 28	1010	1264
World's supply February 28 (excluding Caucho)	5003	4713
Pará receipts since July 1	15,145	15,330

IMPORTS FROM PARA.

THE receipts of India-rubber direct from Pará and Manáos at the port of New York since our last publication are reported in detail below, the figures referring to pounds. The lines in larger type relate to consignees and those in smaller type to the consigners:

February 1.—By the steamer *Moorish Prince*, from Pará:

	Fine.	Medium.	Coarse.	Caucho.	Total.
Reimers & Meyer	81,400	38,500	99,200	15,000	234,100
Pusinelli, Prusse & Co.					
Lawrence Johnson & Co.	88,200	22,400	33,600		144,200
A. Berneaud & Co.	78,900	16,800	22,200		117,900
La Roque da Costa & Co.	9,300	5,600	11,400		26,300
Sears & Co.	5,600		4,800	23,100	33,500
R. F. Sears & Co.					
N. Y. Commercial Co.	1,100	300	3,300	21,500	26,200
Adelbert H. Alden	1,100	300	3,000	3,500	7,900
Ed. Reeks			300	18,000	18,300
Boston Rub. Shoe Co.	11,000	11,000			22,000
La Roque da Costa Co.					
Total	187,300	72,200	140,900	59,600	460,000

February 5.—By the steamer *Justin*, from Pará:

	Fine.	Medium.	Coarse.	Caucho.	Total.
Reimers & Meyer	55,700	15,600	43,600	7,200	122,100
Pusinelli, Prusse & Co.					
N. Y. Commercial Co.	1,800	100	2,400	86,000	90,300
Adelbert H. Alden	1,500		1,800	23,400	26,700
				60,200	60,200
Ed. Reeks	300	100	600	2,400	3,400
Boston Rub. Shoe Co.	15,300	5,200	11,000	35,000	66,500
La Roque da Costa & Co.					
Joseph Banigan		4,000	22,200		26,200
La Roque da Costa & Co.					
Lawrence Johnson & Co	14,500	7,500	2,000		24,000
La Roque da Costa & Co.					
Shipton Green	3,900	700	6,600	200	11,400
Ed. Reeks					
P. Lima	3,000	200	2,800		6,000
Pires, Teixeira & Co.					
Total	94,200	33,300	90,600	128,400	346,500

February 11.—By the steamer *Hildebrand*, from Manáos and Pará:

	Fine.	Medium.	Coarse.	Caucho	Total.
Reimers & Meyer	112,800	28,300	60,900	1,000	203,000
Pusinelli, Prusse & Co., Man's	112,800	24,300	40,600		177,700
Pusinelli, Prusse & Co., Pará		4,000	20,300	1,000	25,300
Boston Rub. Shoe Co.	118,700	22,800	35,700	7,800	185,000
Banco Manáos	74,400	18,200	30,000		122,600
La Roque da Costa & Co.	44,300	4,600	5,700	7,800	62,400
Joseph Banigan	74,400	18,200	29,900		122,500
Banco Manáos					
N. Y. Commercial Co.	67,700	3,900	15,500	2,100	89,200
Brocklehurst & Co.	52,700	2,900	10,000		65,600
Adelbert H. Alden	15,000	1,000	5,500	2,100	23,600
Chas. Ahrenfeldt & Son	2,600			63,600	66,200
H de La Baume, Iquitos					
Lawrence Johnson & Co.	36,400	5,400	20,600		62,400
La Roque da Costa & Co.	28,900	4,000	18,000		50,900
A. Berneaud & Co.	7,500	1,400	2,600		11,500
Otto G. Mayer & Co.	20,200	4,300			24,500
Rud. Zeitz					
Kunhardt & Co.	21,000	3,200	200		24,400
Pusinelli, Prusse & Co., Man's					
Shipton Green	9,000	400	1,000		10,400
Brocklehurst & Co.					
To Order	14,000	3,600	4,600		22,200
Freitas, Sobrinho & Co.					
Total	477,000	90,100	168,400	74,500	810,000

February 20.—By the steamer *Theresina*, from Pará:

	Fine.	Medium.	Coarse.	Caucho	Total.
N. Y. Commercial Co.	344,500	46,700	93,600		484,800
Adelbert H. Alden					
Reimers & Meyer	21,700	19,600	56,600	5,800	103,700
Pusinelli, Prusse & Co.					
Lawrence Johnson & Co	22,800	2,100	23,400		48,300
La Roque da Costa & Co.					
Shipton Green	10,000	1,000	6,000		17,000
Ed. Reeks					
P. Lima	2,000		2,100		4,100
Pires, Teixiera & Co.					
Total	401,000	69,400	181,700	5,800	657,900

March 1.—By the steamer *Cyril*, from Pará:

	Fine.	Medium.	Coarse.	Caucho.	Total
N. Y. Commercial Co.	426,600	41,400	46,600		514,600
Adelbert H. Alden					
Reimers & Meyer	60,000	21,800	59,200		141,000
Pusinelli, Prusse & Co.					
Boston Rub. Shoe Co.	42,500	26,500	12,400		81,400
La Roque da Costa & Co.					
Shipton Green	10,100	6,600	7,900		24,600
P. Mouraille Hermano & Co	8,000	6,600	5,500		20,100
Ed. Reeks	2,100		2,400		4,500
Lawrence Johnson & Co			12,000		12,000
La Roque da Costa & Co.					
Total	539,200	96,300	131,800		773,600

February Imports from Pará	2,274,400
January Imports	2,869,500
February, 1894	2,309,300
February, 1893	2,934,300

PARA IMPORTS VIA EUROPE.

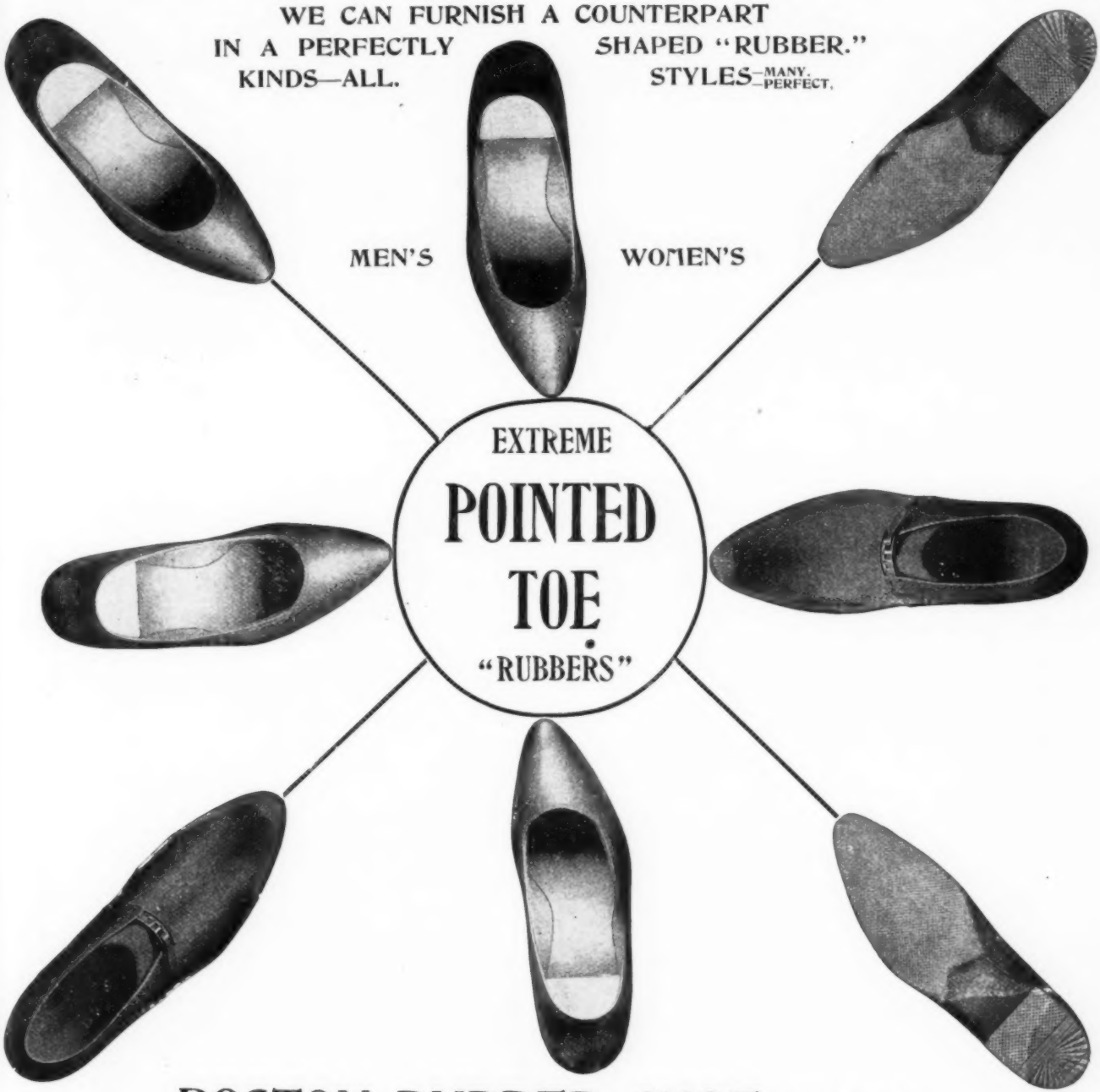
February 12.—By the steamer *Taormina*, from Hamburg:

New York Commercial Co.—Fine	5,500

LEATHER SHOE TOES.

NONE TOO EXTREME. NONE TOO POINTED.

WE CAN FURNISH A COUNTERPART
IN A PERFECTLY SHAPED "RUBBER."
KINDS—ALL. STYLES—MANY. PERFECT.



BOSTON RUBBER SHOE COMPANY,

MAKERS

POINTED TOE "RUBBERS"
FOR POINTED TOE LEATHERS.

OTHER NEW YORK ARRIVALS.

BELOW will be found in detail the imports at New York, during February, 1895, of India-rubber from Mexico, Central America, and South America, other than Pará grades; also, arrivals at New York of African and East Indian sorts:

CENTRALS.

	POUNDS.
FEB. 2.—By the *Washington*=Greytown:	
A. P. Strout (Nicaragua)	6,000
G. Amsinck & Co. (Nicaragua)	1,600
A. S. Lascelles & Co. (Nicaragua)	600
A. N. Rotholz (Nicaragua)	500
Total	8,100
FEB. 4.—By the *Tamuri*=Mexican ports:	
Graham, Hinkley & Co. (Mexican)	1,000
J. M. Ceballos & Co. (Mexican)	700
H. A. Forrest & Co. (Mexican)	700
H. Marquardt & Co. (Mexican)	500
Theodore Hermann (Mexican)	200
Total	3,100
FEB. 7.—By the *Regulus*=Cape Gracias:	
Eggers & Heinlein (Nicaragua)	23,000
Eggers & Heinlein (Tuno)	15,000
Total	38,000
FEB. 6.—By the *Hudson*=New Orleans:	
Earle Brothers (Nicaragua)	4,700
FEB. 7.—By the *Panama*=Cartagena:	
D. A. de Lima & Co. (Cartagena)	2,500
FEB. 8.—By the *Chalmette*=New Orleans:	
W. H. Crossman & Co. (Nicaragua)	10,683
F. H. Robinson (Nicaragua)	6,489
Earle Brothers (Nicaragua)	5,047
Gillespie Brothers (Nicaragua)	1,545
A. T. Morse (Nicaragua)	1,236
Total	25,000
FEB. 11.—By the *Olbers*=Bahia:	
Reimers & Meyer (Pernambuco)	10,000
FEB. 12.—By the *Alliance*=Colon:	
New York Commercial Co.	19,800
W. R. Grace & Co	10,151
G. Amsinck & Co	7,476
A. Santos & Co	9,503
Flint & Co	6,703
Dumarest & Co.	6,934
Bock & Co	2,856
A. P. Strout	2,782
Hirzel, Feltman & Co.	2,500
Isaac Brandon & Co	2,438
A. M. Capen's Sons	2,308
Lanman & Kemp	1,600
Roldan & Van Sickel	1,188
Piza Nephews & Co.	1,159
D. A. de Lima & Co.	1,060
Total	75,477
FEB. 12.—By the *City of Pará*=Colon:	
J. Aparicio & Co.	5,451
J. M. Ceballos & Co.	2,600
R. F. Cornwell	1,395
D. A. de Lima & Co.	1,945
Lanman & Kemp	853
Roldan & Van Sickel	834
Eggers & Heinlein	544
G. Amsinck & Co	629
Flint & Co	588
H. Marquardt & Co.	280
Total	14,479
FEB. 13.—By the *Allea*=Cartagena:	
D. A. de Lima & Co (Cartagena)	4,000
W. R. Grace & Co. (Cartagena)	3,000
Kunhardt & Co. (Cartagena)	1,000
Ellinger Bros. (Nicaragua)	500
Total	8,500
FEB. 13.—By the *Seneca*=Mexican ports:	
H. W. Peabody & Co. (Mexican)	1,100
Seeger & Guernsey Co. (Mexican)	450
E. Steiger & Co. (Mexican)	200
Total	2,050
FEB. 17.—By the *Scandia*=Hamburg:	
Schultz & Ruckgaber	1,100
FEB. 18.—By the *Louisiana*=New Orleans:	
Earle Brothers (Nicaragua)	12,000
W. H. Crossman & Bro. (Nicaragua)	10,000
F. H. Robinson (Nicaragua)	3,000
A. T. Morse (Nicaragua)	2,500
Total	27,500
FEB. 21.—By the *Advance*=Colon:	
J. M. Ceballos & Co.	2,300
New York Commercial Co.	2,100
A. Santos & Co.	1,600
Isaac Brandon & Bro.	437
Total	6,437
FEB. 21.—By the *Vittoria*=Mexican ports:	
C. Valdero	800
FEB. 22.—By the *Seguranca*=Vera Cruz:	
Graham, Hinckley & Co. (Mexican)	200
FEB. 24.—By the *Colombia*=Colon:	
J. Aparicio & Co	5,516
R. F. Cornwell	1,565
Roldan & Van Sickel	956
Jacob Balz	869
U. S. Commercial and Crop Advance Co.	406
G. Amsinck & Co	375
Lanman & Kemp	285
Hoadley & Co.	215
Total	10,167
FEB. 25.—By the *Flamborough*=Livingston:	
Otto G. Mayer & Co (Nicaragua)	300
FEB. 26.—By the *Andes*=Cartagena:	
Kunhardt & Co. (Cartagena)	1,500
FEB. 28.—By the *Orizaba*=Vera Cruz:	
E. Zaranz & Co. (Mexican)	421
Total Centrals for February	23,251
Total for January	341,029

AFRICANS.

	POUNDS.
FEB. 1.—By the *Alecto*=London:	
George Ropes—Madagascar pinky	2,845
Madagascar niggers	855
Total	3,700
FEB. 1.—By the *Cufic*=Liverpool:	
Joseph Cantor	2,600
American Wringer Co.—Addah niggers	12,500
Total	15,100
FEB. 2.—By the *Paris*=Southampton:	
George A. Alden & Co.—Mozambique	400
FEB. 3.—By the *Aurania*=Liverpool:	
George A. Alden & Co.—Acera and Small ball	25,000
Reimers & Meyer—Accra strip and biscuit and Sierra Leone niggers	28,200
Otto G. Mayer & Co—Accra strip	1,300
Total	54,500
FEB. 3.—By the *Patria*=Hamburg:	
Reimers & Meyer—Cameroon	6,000
FEB. 10.—By the *Umbria*=Liverpool:	
Otto G. Mayer & Co.—Accra strip	16,800
FEB. 11.—By the *Maasdam*=Rotterdam:	
Geo. A. Alden & Co.—Benguella and Kongo	16,000
FEB. 11.—By the *Dania*=Hamburg:	
George A. Alden & Co.—Madagascar, Mozambique, and Accra	37,000
FEB. 12.—By the *Cevic*=Liverpool:	
Otto G. Mayer & Co.—Accra	20,000
FEB. 15.—By the *Peninsular*=Lisbon:	
George A. Alden & Co.	58,900
FEB. 15.—By the *Britannic*=Liverpool:	
Reimers & Meyer—Accra and Sierra Leone	27,000
FEB. 17.—By the *Scandia*=Hamburg:	
Reimers & Meyer—Cameroon	7,000
FEB. 18.—By the *France*=London:	
George A. Alden & Co.—Madagascar niggers	10,600
George Ropes—Madagascar black	900
Madagascar pinky	600
Total	12,100
FEB. 19.—By the *Servia*=Liverpool:	
George A. Alden & Co.—Gaboon and Accra	25,000
FEB. 19.—By the *Tauric*=Liverpool:	
H. H. Smythe—Almeidina	1,800
FEB. 19.—By the *Richmond Hill*=London:	
George A. Alden & Co.—Madagascar niggers	45,700
Mozambique	1,600
Total	47,300
FEB. 19.—By the *Berlin*=Southampton:	
W. A. Brown & Co.—Madagascar niggers	15,000
FEB. 20.—By the *Majestic*=Liverpool:	
George A. Alden & Co.—Addah niggers	15,000
FEB. 23.—By the *Etruria*=Liverpool.	
Reimers & Meyer—Accra	10,000
FEB. 23.—By the *Prussia*=Hamburg:	
George A. Alden & Co.—Accra, Batanga, etc.	45,000
Reimers & Meyer—Madagascar	18,000
Total	63,000
Total Africans for February	441,500
Total for January	582,000

EAST INDIAN.

	POUNDS.
FEB. 10.—By the *Manitoba*=London:	
W. A. Brown & Co.—Pontianak	50,000
Reimers & Meyer—Borneo	15,000
Penang	5,000
Total	70,000
FEB. 23.—By the *Paris*=Southampton:	
W. A. Brown & Co.—Pontianak	30,000
Total East Indian for February	100,000
Total for January	28,800

GUTTA-PERCHA.

	POUNDS.
FEB. 17.—By the *Scandia*=Hamburg:	
Robert Soltau & Co.	13,000
FEB. 23.—By the *Prussia*=Hamburg:	
Robert Soltau & Co.	5,000
Total Gutta-percha for February	18,000
Total for January	72,700

RECAPITULATION.

	POUNDS.
Pará—direct imports	2,274,400
Pará—via Europe	5,500
Centrals	239,251
Africans	441,500
East Indian	100,000
Gutta-percha	18,000
Total at New York for February	3,078,651
Total for January	4,038,229

BOSTON ARRIVALS.

	POUNDS.
FEB. 1.—By the *Catalonia*=Liverpool:	
Reimers & Meyer—Africans	3,000
FEB. 1.—By the *Kansas*=Liverpool:	
George A. Alden & Co.—Pará	11,200
Boston Rubber Shoe Co.—Africans	4,500
Reimers & Meyer—Africans	3,000
	18,700
FEB. 5.—By the *Ottoman*=Liverpool:	
Reimers & Meyer—Africans	15,000
FEB. 9.—By the *Angloman*=Liverpool:	
Reimers & Meyer—Africans	10,000
FEB. 10.—By the *Akaba*=Hamburg:	
George A. Alden & Co.—Africans	2,800
FEB. 12.—By the *Sagamore*=Liverpool:	
George A. Alden & Co.—Africans	13,500
Reimers & Meyer—Africans	26,000
	39,500
FEB. 20.—By the *Samaria*=Liverpool:	
George A. Alden & Co.—Africans	3,300
FEB. 22.—By the *British Queen*=London:	
George A. Alden & Co.—East Indian	6,700
To Order—East Indian	2,000
	8,700
FEB. 25.—By the *Michigan*=Liverpool:	
George A. Alden & Co.—Africans	15,500
Reimers & Meyer—Africans	10,600
	26,100
Total at Boston for February	127,100
Total for January	24,950

NEW ORLEANS.

FEBRUARY.

	POUNDS.	VALUE.
Nicaragua	58,267	$32,102